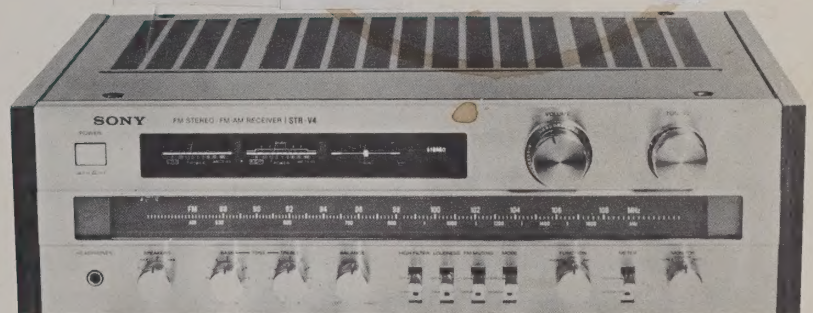


SONY®

Receivers

STR-V2 STR-V3 STR-V4



servicing information

SONY INDUSTRIES

Hi-Fi Technical Support

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1. Introduction

The tuner sections of the STR-V series receivers use multipurpose ICs for the bulk of the signal processing at IF frequencies and below. In fact, the smaller receivers (STR-V2 to V4) use ICs for everything in the tuner except the FM front end. This makes conventional troubleshooting techniques near useless. More sophisticated techniques, such as signal injection for FM IF troubleshooting, proved unreliable. Signal tracing with a scope equipped with 10X probes turned out to be the simplest and most reliable method of determining whether or not the circuitry is working properly.

The circuitry in all STR-V series is similar. In fact, the tuner sections of the STR-V3 and V4 are almost identical. Even the top-of-the-line V7 uses the same FM, MPX, and AM ICs, though they are supplemented by many additional components. The power amplifier sections of the STR-V3 to V7 also reflect the same basic design (with due allowances for the power differences), a straightforward and reliable design that has appeared in previous SONY models. The little STR-V2 is the only model with a "different" audio design. As Fig. 1-1 shows, the tone control functions are performed in the power-amplifier section. The overall voltage gain is made quite high, so tuners and tape recorders can drive the power amplifier to rated output without the need for preamplification!

Audio is applied to the input stage through a low-pass filter consisting of resistor R554 and capacitor C554. This prevents RFI from reaching a sensitive junction. The input stage is a differential amplifier consisting of transistors Q551 and Q552. Output voltage appearing across collector load resistor R556 is directly coupled to the base of Q554, a class-A high-level voltage amplifier. Transistor Q553 is a constant-current source operated as an active load for Q554. This permits maximum possible voltage gain from Q554, and maximum peak-to-peak voltage swings. The voltage drop across diode D551, in series with the collectors of Q553 and Q554, provides operating bias for the output transistors (Q557 and Q558) and their drivers (Q555 and Q556).

The feedback path from the amplifier output point to the inverting input of the input stage (Q552's base) contains the tone controls. The frequency-selective voltage dividers formed by the tone-control components thus determine the amount of signal fed back to Q552, hence the overall amplifier AC gain. The AC signal path from the tone controls is through resistor R560 and capacitor C555. Resistor R558 forms the shunt arm of the feedback divider, since it is grounded (to AC) by capacitor C556. However, the DC path from the power-amplifier output point to Q552 is through resistors R559 and R558. Since there is no DC path from the base of Q552 to ground, the amplifier has a DC gain of 1, hence is highly stable. Capacitor C556 also filters AC signal from the DC path.

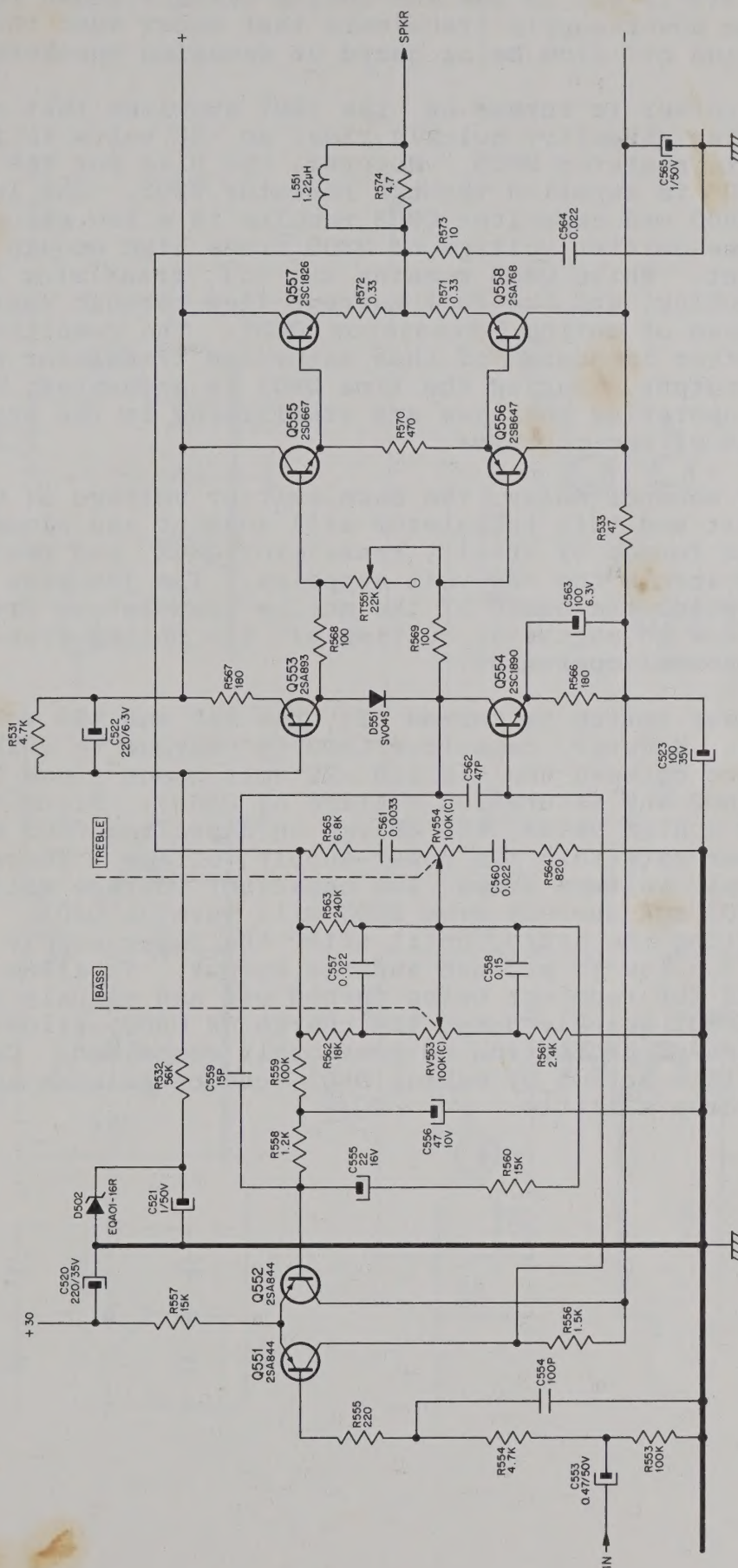


Fig. 1-1. STR-V2 Audio Amplifier

Muting. The STR-V3 and V4 use the muting circuit shown in Fig. 1-2 to prevent the power-supply transients that occur when the receiver is turned on and off from being heard or damaging speakers.

When the receiver is turned on, the $\pm 20\text{V}$ supplies that operate the preamplifier circuitry quickly rise, so +20 volts is immediately available to resistor R805. However, the bias for the base of transistor Q803 is supplied through resistor R803. The long time constant of R803 and capacitor C802 results in a few seconds delay before the base-emitter voltage of Q803 rises high enough to cause Q803 to conduct. While Q803 remains cut off, transistor Q802 is also nonconducting, and the full current flow through resistor R805 goes to the base of muting transistor Q801. The resulting low collector-emitter impedance of this saturated transistor shorts the preamplifier output. During the time Q801 is saturated, the preamp is muted and operating voltages are stabilizing in the preamp and tuner sections of the receiver.

After a few seconds delay, the base-emitter voltage of Q803 will exceed 0.6 volt and this transistor will conduct and close the series circuit formed by itself, transistor Q802, and resistors R805 and R806 across the ± 20 volt supplies. The junction of R805 and R806 (to which the bases of the muting transistors are connected) will now go negative, cutting off the muting transistors and allowing normal operation.

When the power switch is turned off, the +15 and ± 20 volt lines begin to drop. However, capacitor C803 is charged to nearly the full difference between the +15 and -20 volt buses (less base-emitter drop of Q802 and saturation voltage of Q803). Since resistor R804 has such a high value, the charge on capacitor C803 will decay at a far slower rate than the power-supply voltage. Therefore as the power-supply voltage drops, the capacitor voltage will cut off transistor Q802 and current from R805 will turn on Q801. Q801 will remain on, muting the audio, until after the power-supply voltages have decayed too low to produce audible output. To allow for the possibility of the receiver being turned off and quickly turned on again, diode D801 quickly dumps the charge on C802, allowing Q803 to provide turn-on protection as previously described. Capacitor C801 aids in this action by making D801 conduct as soon as the supply voltages drop a little.

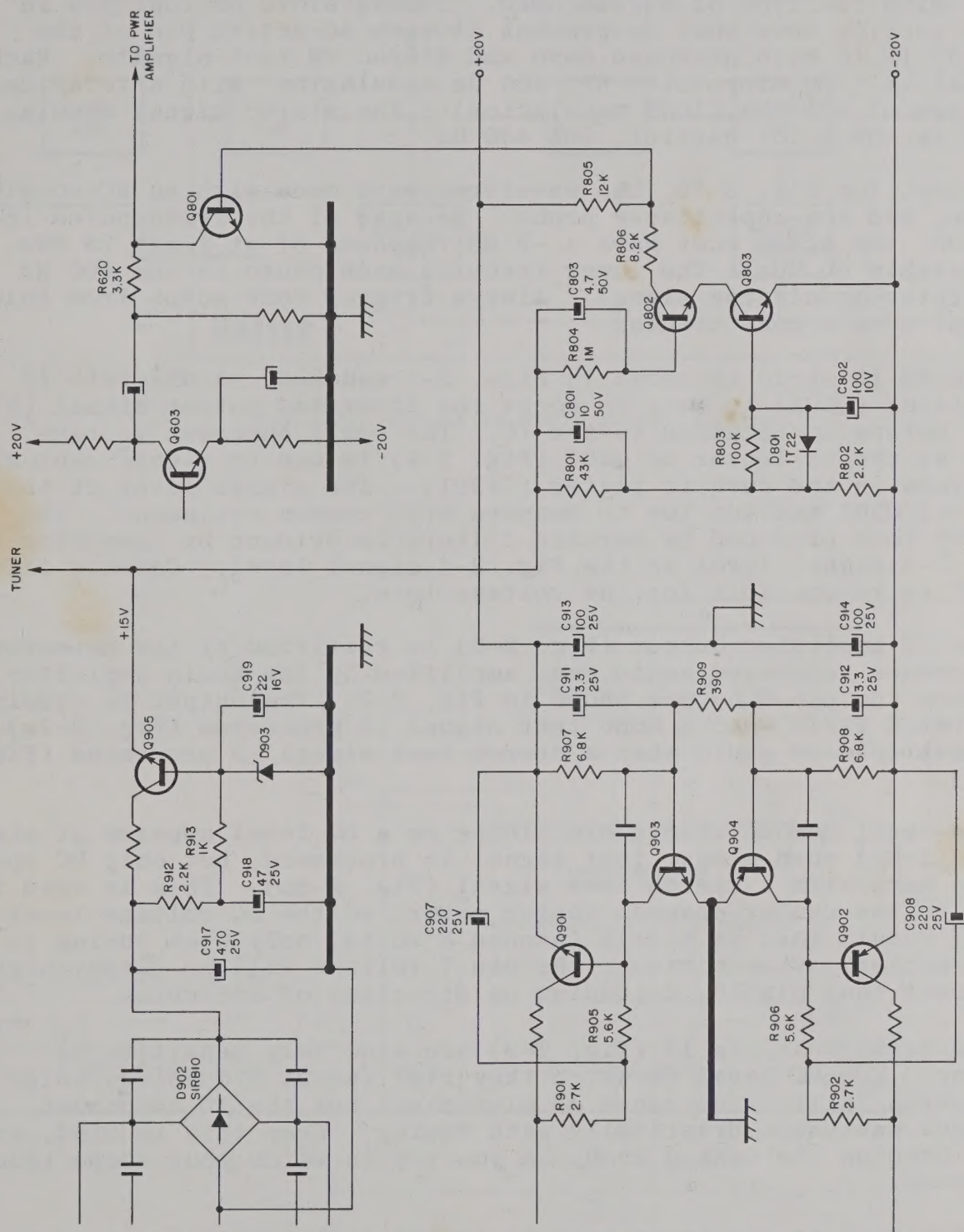


Fig. 1-2. STR-V3/V4 Muting Circuit

2. Signal Tracing the FM IF Strip

Signal tracing through an IF strip containing a multipurpose IC is one of the few reliable ways of troubleshooting. However, some of the waveforms the technician will encounter are unusual, and/or vary with the type of signal used. The waveform photographs in this section show what is present at each AC-active pin of the HA1137 IF IC with standard mono and stereo FM test signals. Each signal is 1000 microvolts RF, 400 Hz modulation, with a total deviation of ± 75 kHz (100% modulation). The stereo signal modulation is 10% pilot carrier, 90% 400 Hz.

Except for Fig. 2-7b, the waveforms were made with an AC-coupled scope, and low-capacitance probe. Because of the frequencies involved, the scope must have a -3 dB response of at least 25 MHz, preferably 50 MHz. The lower trace in each photo is the 400 Hz generator-modulating signal. Always trigger your scope from this signal when signal tracing.

The FM IF strip is shown in Figs. 2-1 and 2-2. A discrete IF amplifier (Q201) is used to boost the front-end output signal (Fig. 2-3) before application to the IC. The small apparent voltage gain at the collector of Q201 (Fig. 2-4) is due to significant signal loss in the ceramic filter (CF201). The signal level at the base of Q201 was too low to measure with common equipment. The signal loss produced by ceramic filters is evident by comparing the Fig. 2-5 signal level to the Fig. 2-4 signal level. Ceramic filter CF202 is responsible for the voltage loss.

The IF amplifier output (Fig. 2-6) is rectified by the detector to produce recovered audio, and amplified by the audio amplifier to produce the pin 6 output shown in Fig. 2-7. The output is simply recovered audio when a mono test signal is processed (Fig. 2-7a), and multiplexed audio when a stereo test signal is processed (Fig. 2-7b).

Low-level demodulated audio riding on a DC level appears at pin 7 (Fig. 2-8a) when a mono test signal is processed, but only DC appears here with a stereo test signal (Fig. 2-8b). This is used to operate the center-channel tuning meter, so the DC voltage level at pin 7 equals that at pin 10 (around 5 volts) only when tuning is dead center. When mistuned the pin 7 voltage will be either higher or lower than pin 10, depending on direction of mistuning.

The signals at pin 13 (Fig. 2-9) are also very sensitive to tuning. The DC level on which they ride (about 4.5 volts) holds up over a fairly wide range of mistuning, but the AC component changes waveshape drastically with tuning. Keep this in mind, and your hand on the tuning knob, as you try to match your scope trace to these.

The signal at the input (pin 9) to the last auxiliary circuit (muting) in the HA1137 is still RF (Fig. 2-10).

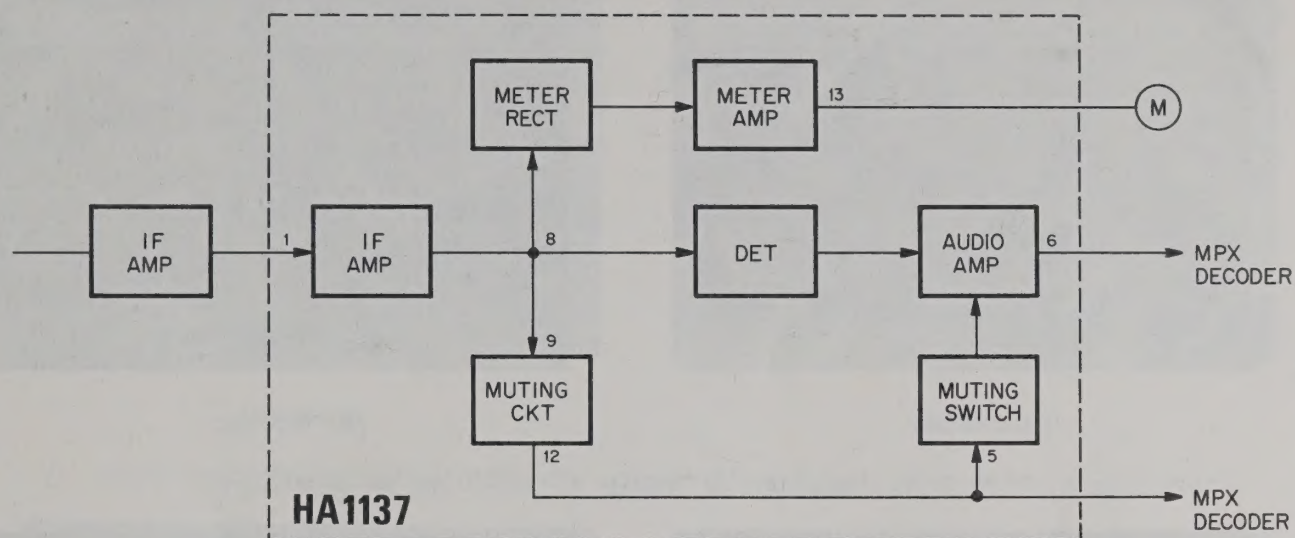


Fig. 2-1. STR-V4 IF Strip Block Diagram

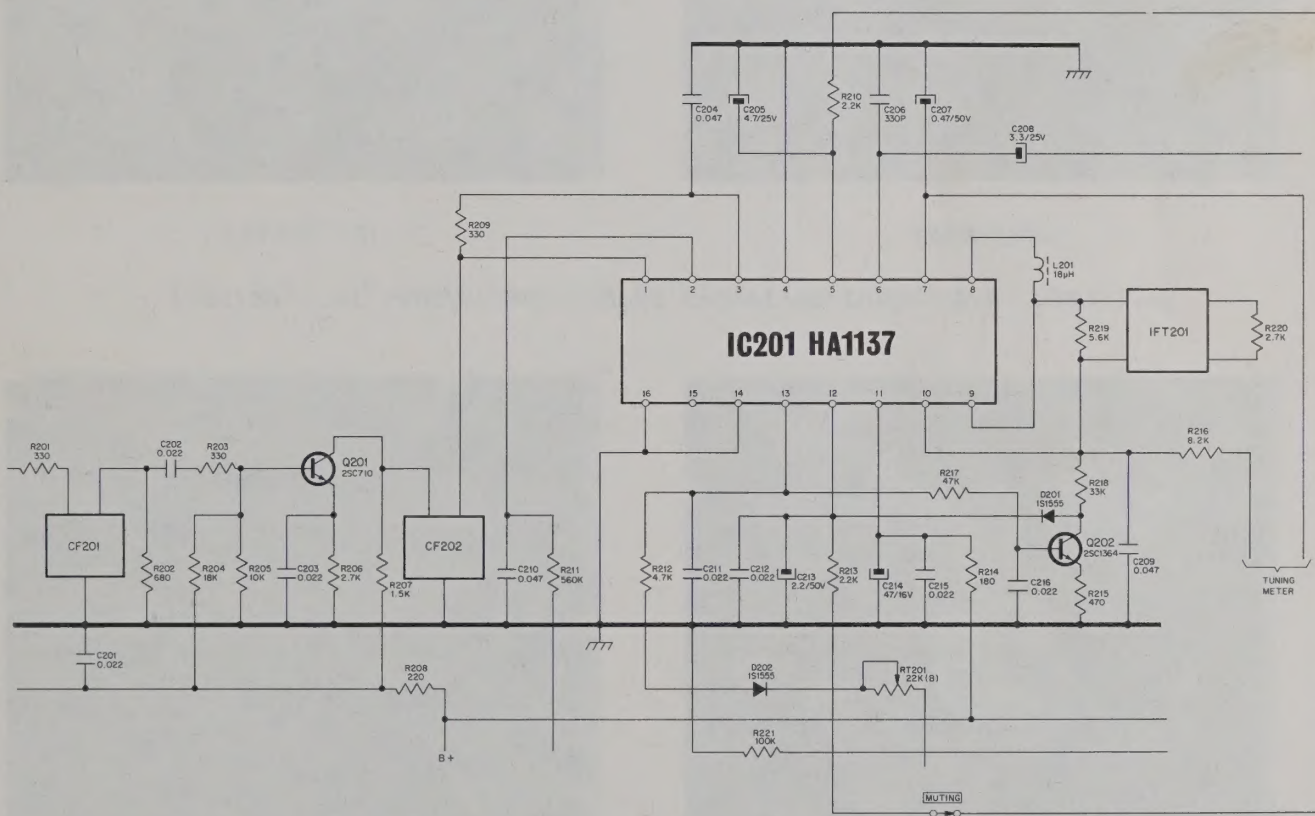
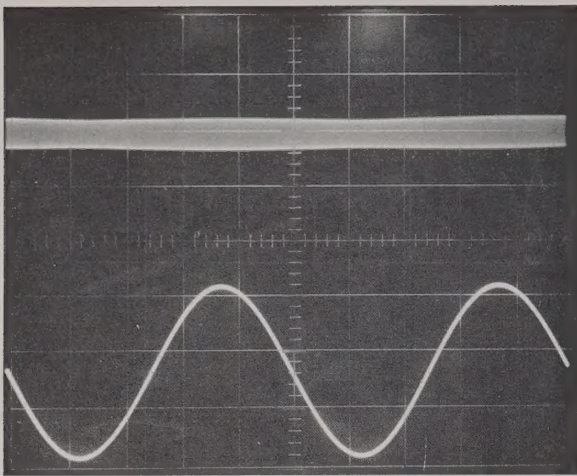
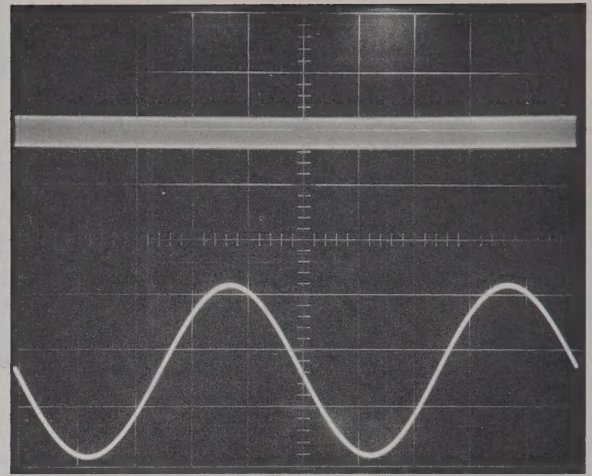


Fig. 2-2. STR-V4 IF Strip Schematic Diagram

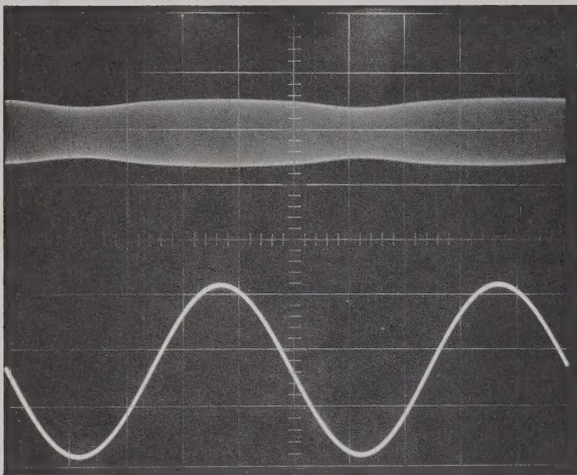


(a) Mono

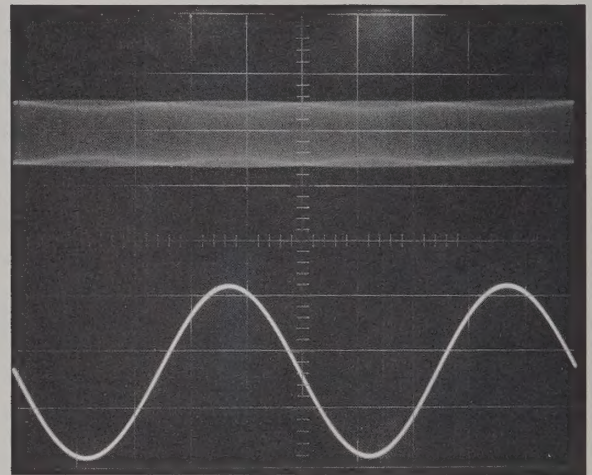


(b) Stereo

Fig. 2-3. Input to IF Strip ($V=.1V/Div$; $H=.5\text{ mS}/Div$)

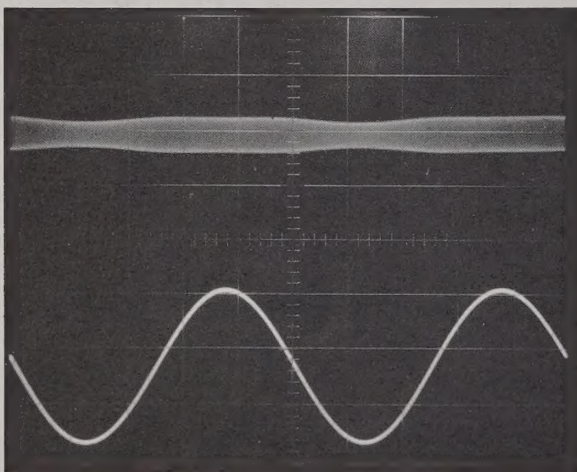


(a) Mono

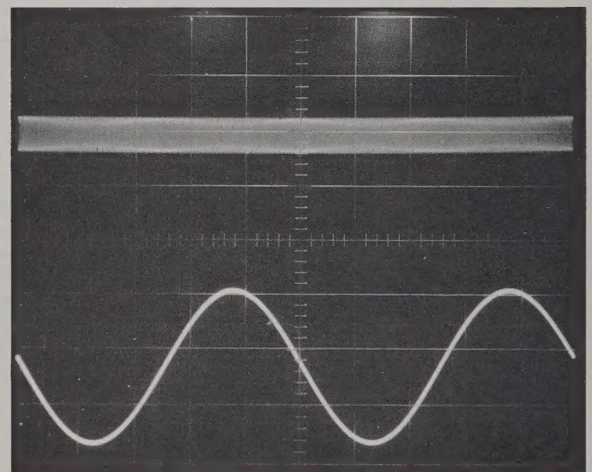


(b) Stereo

Fig. 2-4. Q201 Collector Signal ($V=.1V/Div$; $H=.5\text{ mS}/Div$)

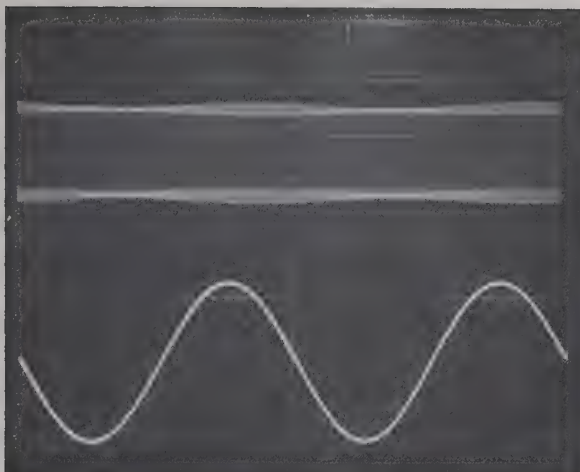


(a) Mono

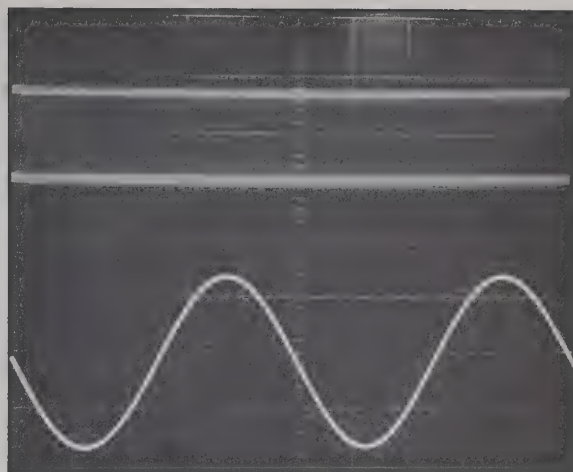


(b) Stereo

Fig. 2-5. IF Amplifier (Pin 1) Input Signal ($V=.1V/Div$; $H=.5\text{ mS}/Div$)

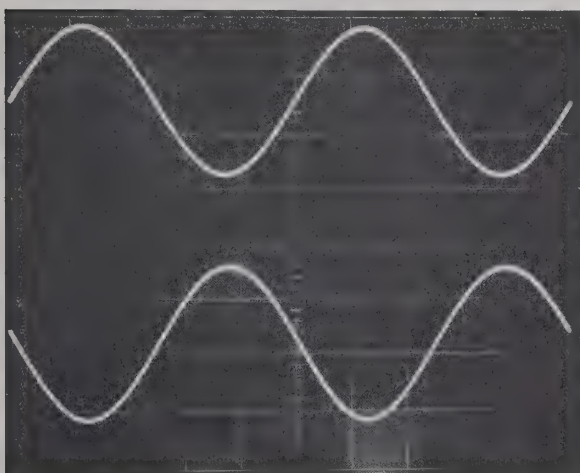


(a) Mono

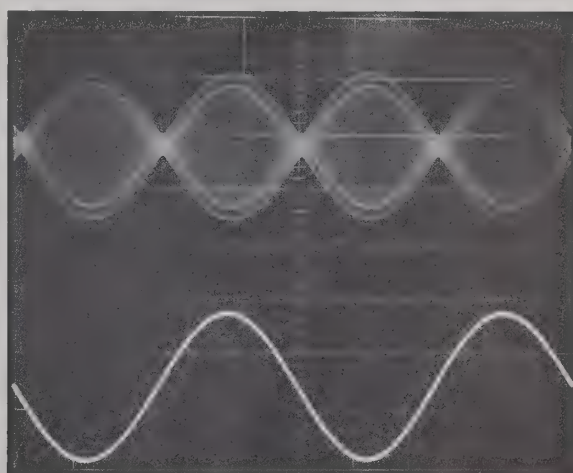


(b) Stereo

Fig. 2-6. IF Amplifier (Pin 8) Output Signal ($V=.1V/Div$; $H=.5\text{ mS}/Div$)

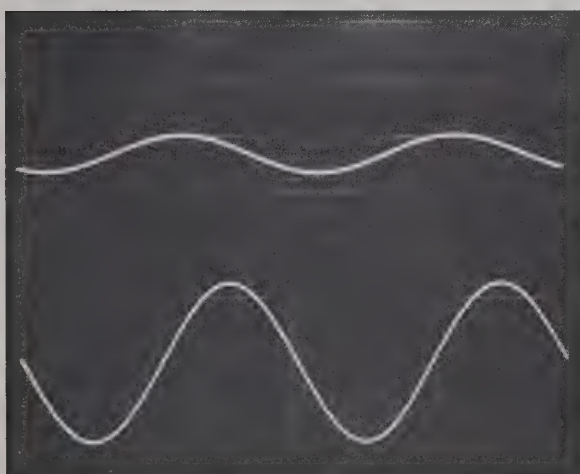


(a) Mono

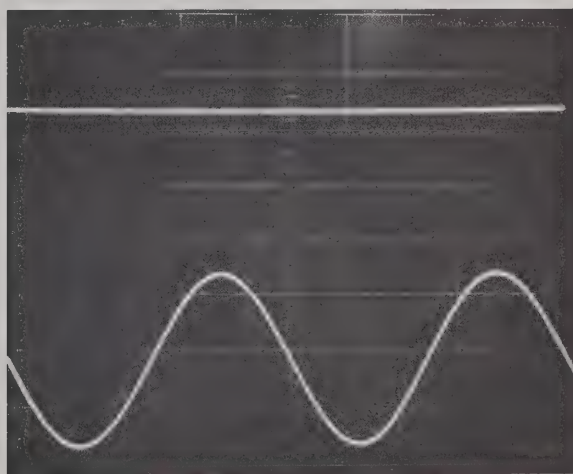


(b) Stereo

Fig. 2-7. AF Amplifier (Pin 6) Signal ($V=.2V/Div$; $H=.5\text{ mS}/Div$)

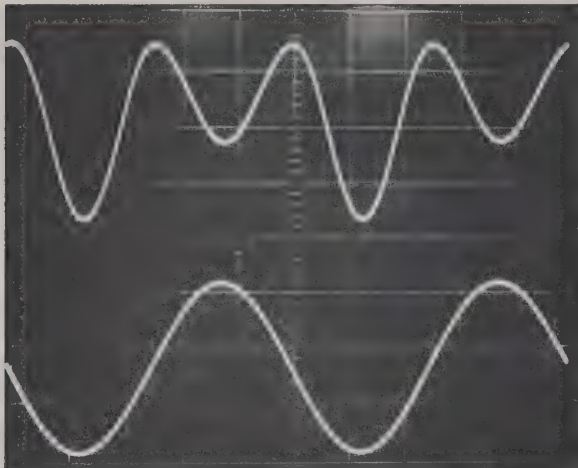


(a) Mono ($V=.1V/Div$)

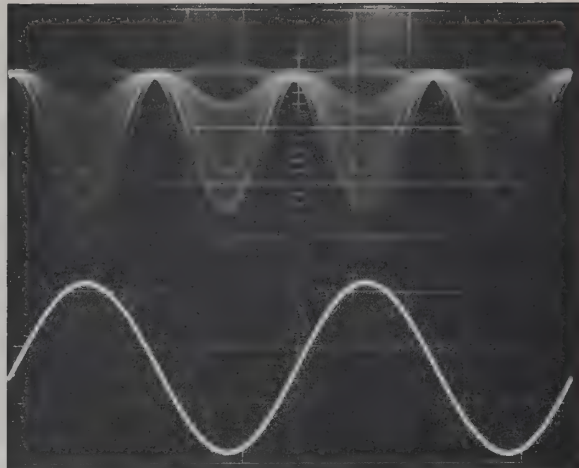


(b) Stereo ($V=2V/Div\text{ DC}$)

Fig. 2-8. Detector (Pin 7) Output Signal ($H=.5\text{ mS}/Div$)

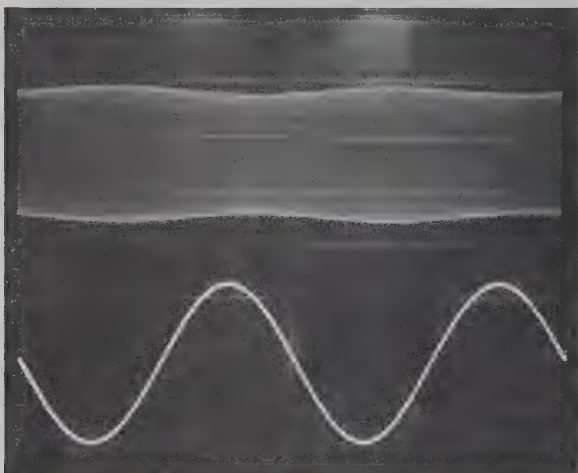


(a) Mono

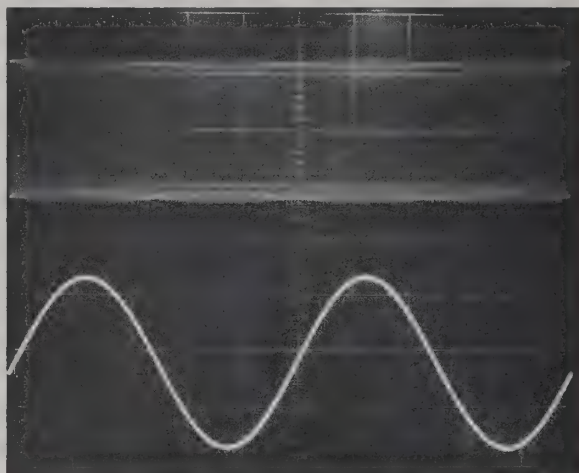


(b) Stereo

Fig. 2-9. Meter-Amplifier Output (Pin 13) Signal ($V=.1V/Div$; $H=.5\text{ mS}/Div$)



(a) Mono



(b) Stereo

Fig. 2-10. Muting Circuit Input (Pin 9) Signal ($V=.1V/Div$; $H=.5\text{ mS}/Div$)

3. Signal Tracing the Multiplex Decoder

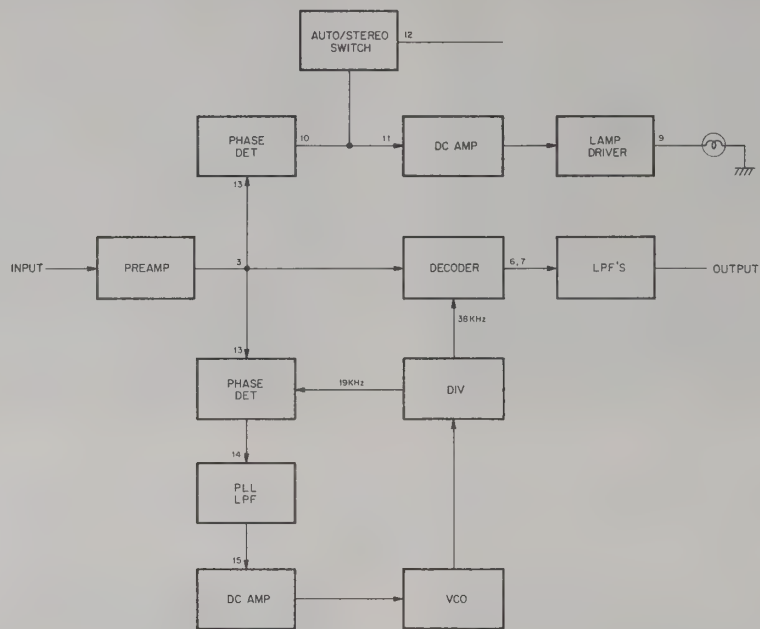
Signal tracing a multiplex decoder with a scope is complicated by the variety of waveforms present in a functioning decoder. Some of these waveforms are rather bizarre, so the technician may be uncertain of whether the waveform he is observing is correct or not. The waveform photographs in this section show what is present at each AC-active pin of the HA1196 MPX decoder IC with a standard FM stereo test signal (1000 microvolts RF, 10% pilot carrier, 90% 400 Hz modulation, ± 75 kHz total deviation). The circuit shown in Fig. 3-1 is used in the STR-V3 and V4. However, the STR-V2, V5, V6, and V7 decoders are so similar that these waveforms will aid in troubleshooting these models also.

Except for Fig. 3-3, the lower trace in each photo is a reference from the signal generator, either the 400 Hz modulating signal or the 19 kHz pilot carrier. These reference signals are included for greater understanding of the waveforms being discussed (upper traces).

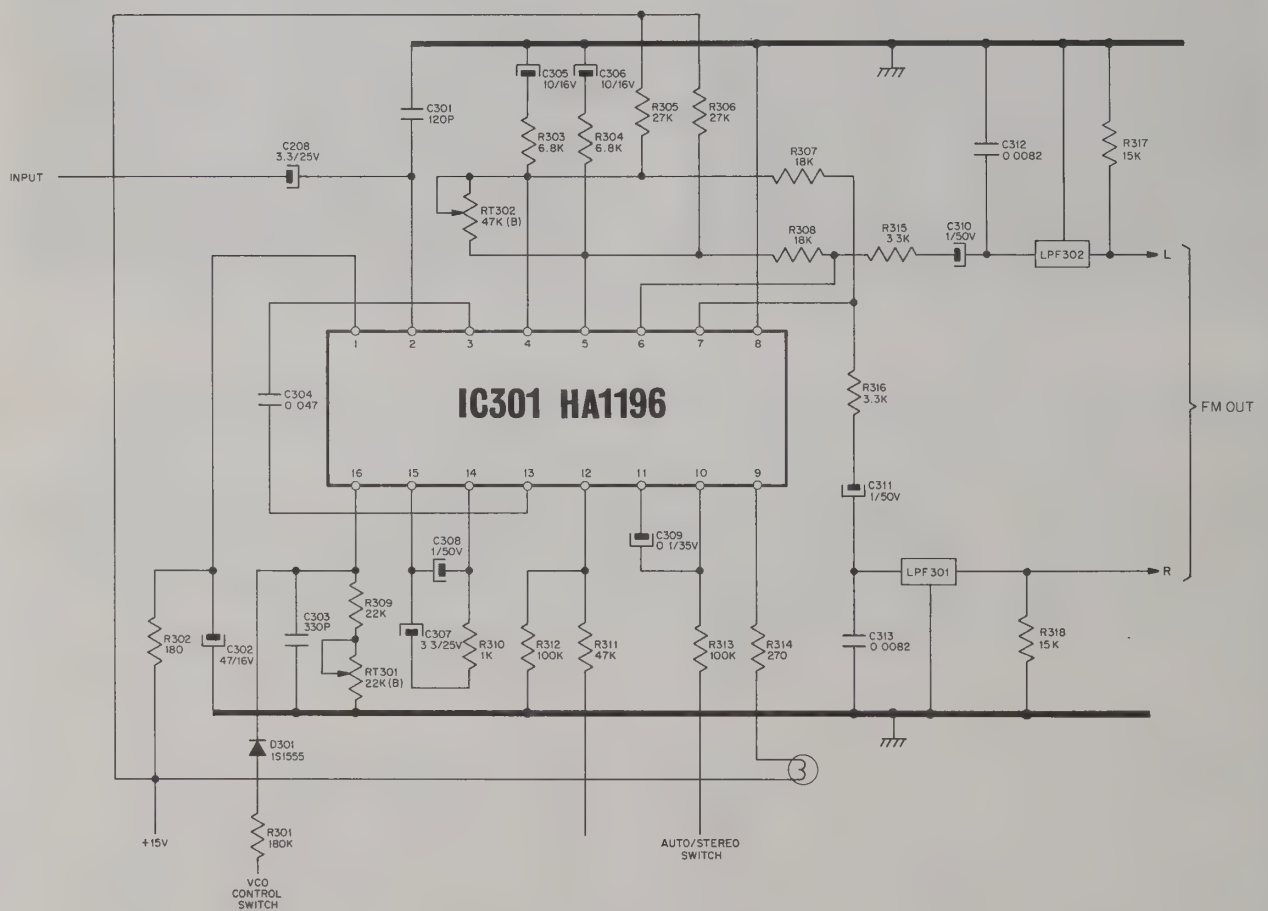
The preamplifier in the HA1196 simply increases the FM detector output signal (Fig. 3-2) to the level needed to operate the decoder and phase detectors (Fig. 3-4).

The decoder circuitry combines the 38 kHz carrier reconstituted by the PLL circuit with the amplified FM detector signal to produce L- and R-channel signals. Pot RT202 is connected across pins 4 and 5 (an intermediate point in the decoder) to permit separation adjustment. Note also that the 20 μ S/Div traces of decoder pins 4-7 (Figs 3-5 to 3-8) show the 38 kHz subcarrier component in the resultant output signals. Most of this ripple component, as well as traces of the 19 kHz pilot carrier, will be removed by the low-pass filters (LPF301 and LPF302). The filter output is therefore a pair of low-ripple signals (Fig. 3-3) that are identical to the generator's modulating signal (lower trace of Fig. 3-2).

The PLL oscillator (Fig. 3-9) operates at 76 kHz, four times the pilot-carrier frequency. This is divided once to make 38 kHz carrier for the decoder, and twice to make 19 kHz carrier for the phase detectors. Most of the classic phase-locked loop circuitry (VCO, frequency divider, phase detector (or comparator), DC error amplifier) is in the HA1196; only some the low-pass filter components (C307, C308, R310) and the VCO frequency components (C303, R309, and RT301) are external to the IC.

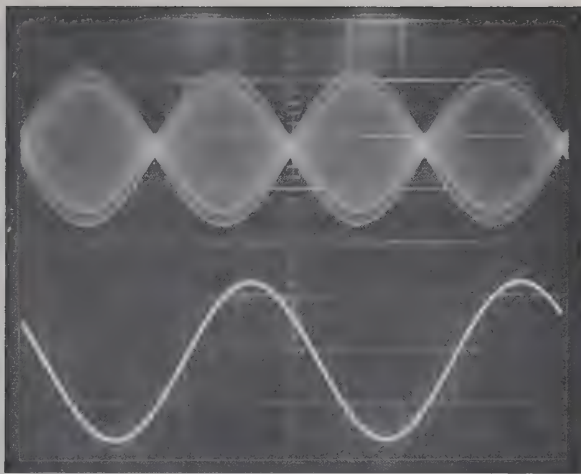


(a) Block diagram



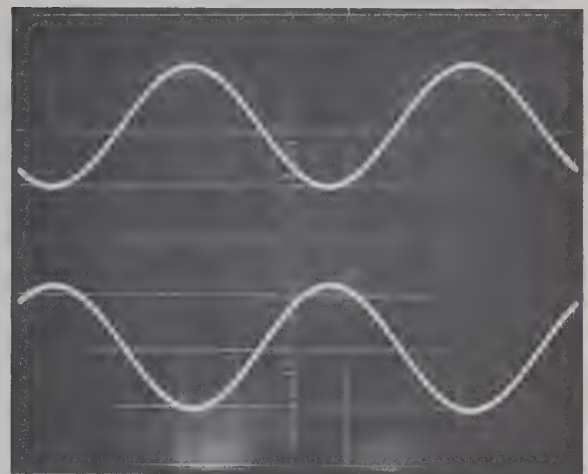
(b) Schematic diagram

Fig. 3-1. STR-V4 Multiplex Decoder



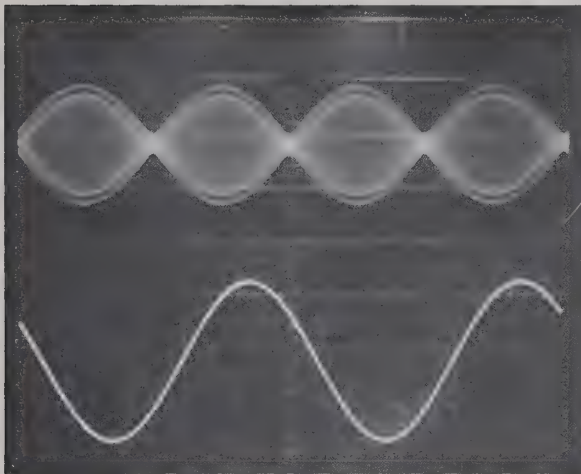
$V = .2V/Div$; $H = .5 \text{ mS}/Div$

Fig. 3-2. Preamp Input (Pin 2) Signal

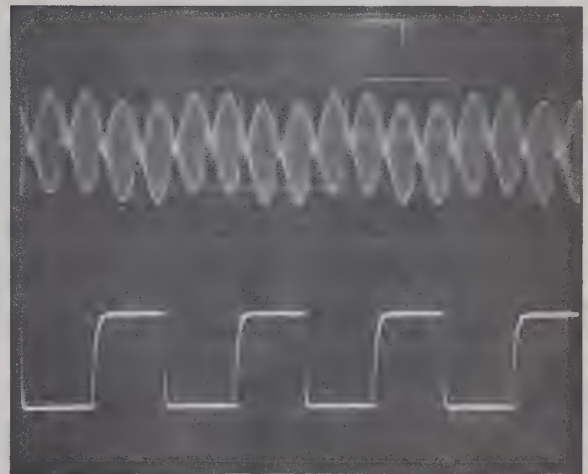


$V = .5/Div$; $H = .5 \text{ mS}/Div$

Fig. 3-3. MPX Decoder Block Output Signals

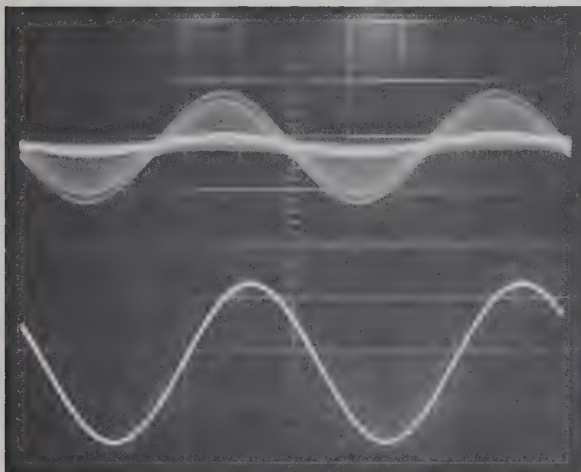


(a) $V = 1V/Div$; $H = .5 \text{ mS}/Div$

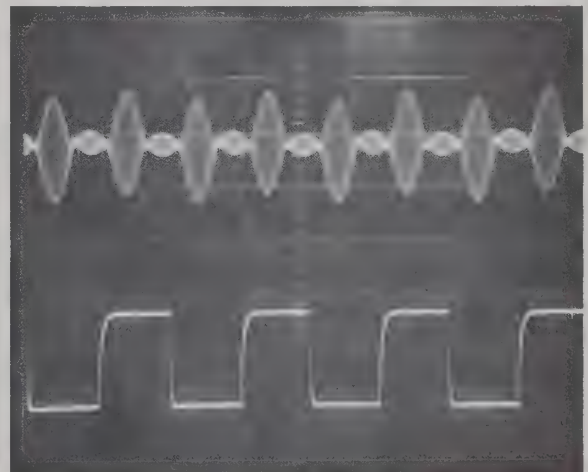


(b) $V = 1V/Div$; $H = 20 \mu S/Div$

Fig. 3-4. Preamp Output (Pin 3) And Phase Detector Input (Pin 13) Signals

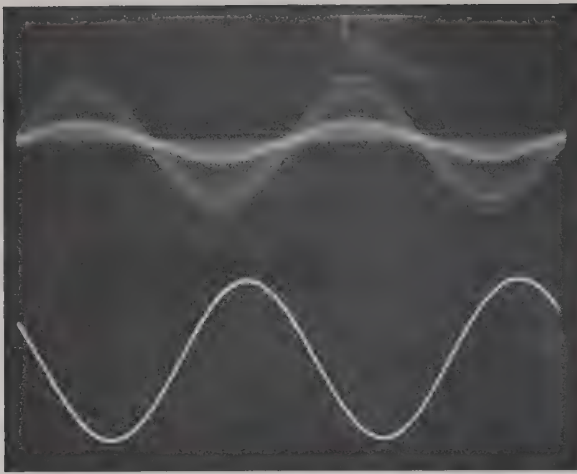


(a) $V = .5V/Div$; $H = .5 \text{ mS}/Div$

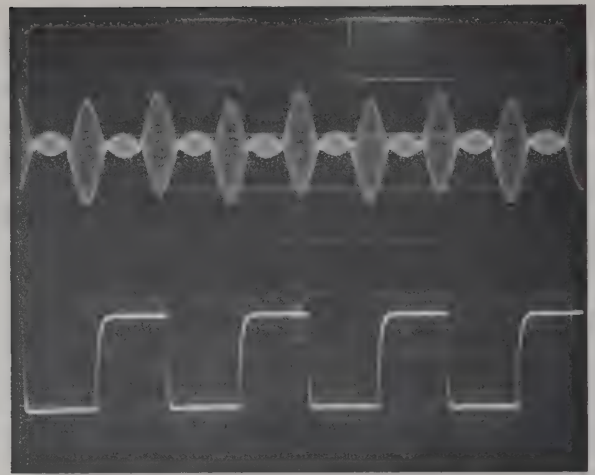


(b) $V = .5V/Div$; $H = 20 \mu S/Div$

Fig. 3-5. Decoder Internal (Pin 4) Signal

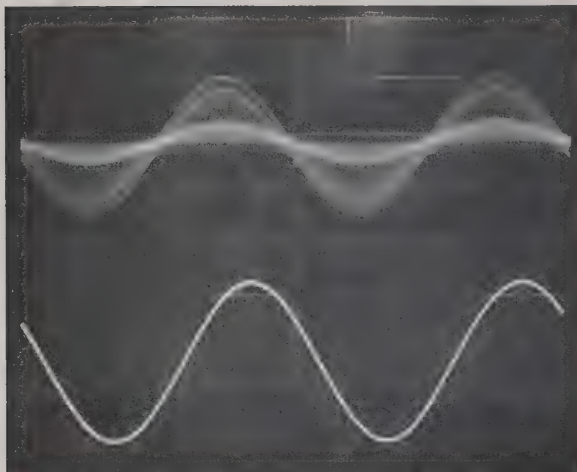


(a) $V=.5V/Div$; $H=.5\text{ mS}/Div$

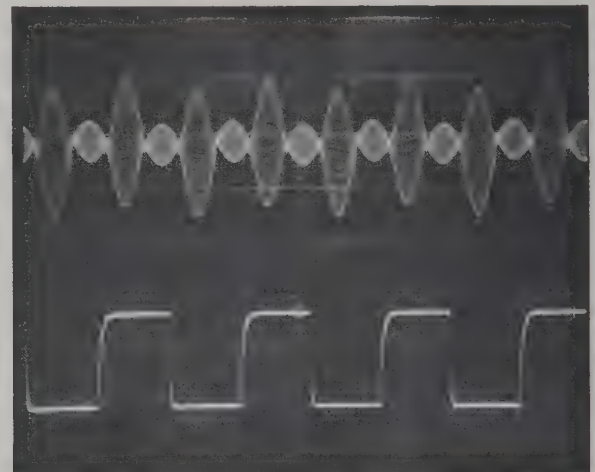


(b) $V=.5V/Div$; $H=20\text{ }\mu\text{S}/Div$

Fig. 3-6. Decoder Internal (Pin 5) Signal

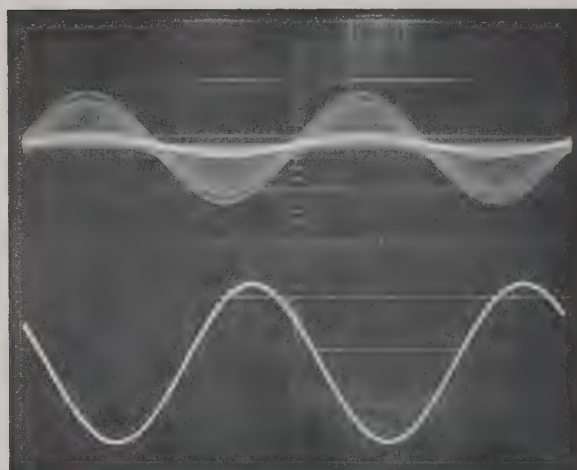


(a) $V=2V/Div$; $H=.5\text{ mS}/Div$

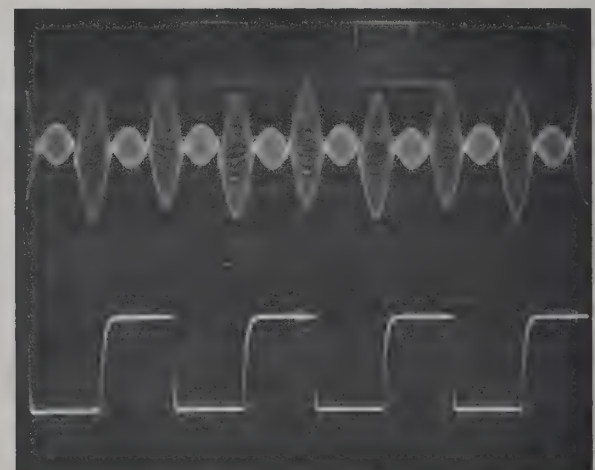


(b) $V=2V/Div$; $H=20\text{ }\mu\text{S}/Div$

Fig. 3-7. Decoder Output (Pin 6) Signal

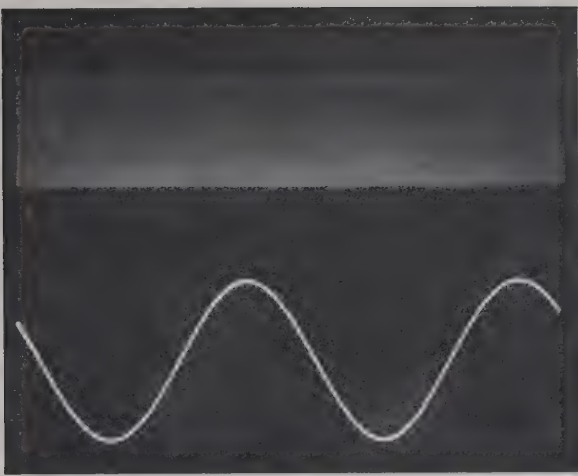


(a) $V=2V/Div$; $H=.5\text{ mS}/Div$

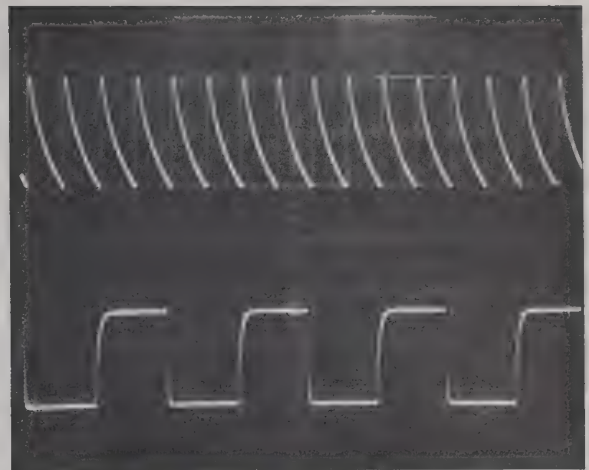


(b) $V=2/Div$; $H=20\text{ }\mu\text{S}/Div$

Fig. 3-8. Decoder Output (Pin 7) Signal

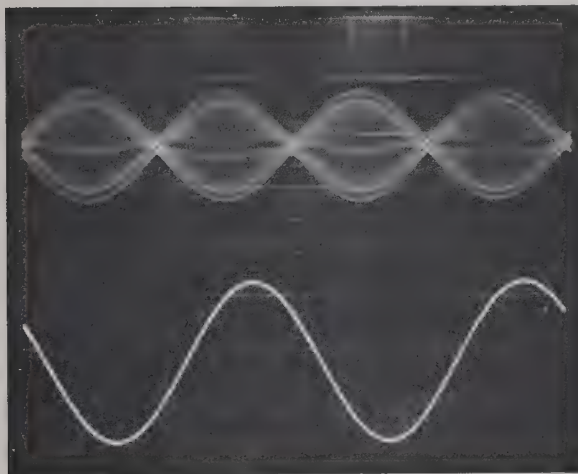


(a) $V=2V/Div$; $H=.5 \text{ ms}/Div$

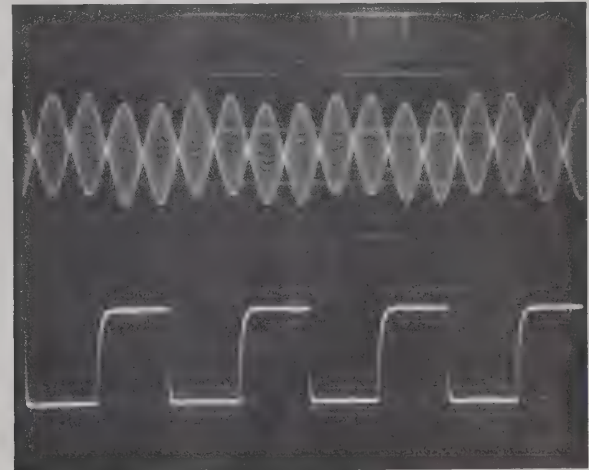


(b) $V=2V/Div$; $H=20 \mu S/Div$

Fig. 3-9. VCO Output (Pin 16) Signal

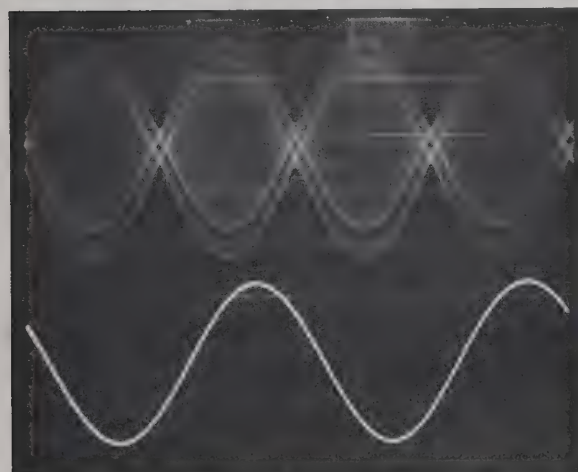


(a) $V=.1V/Div$; $H=.5 \text{ ms}/Div$

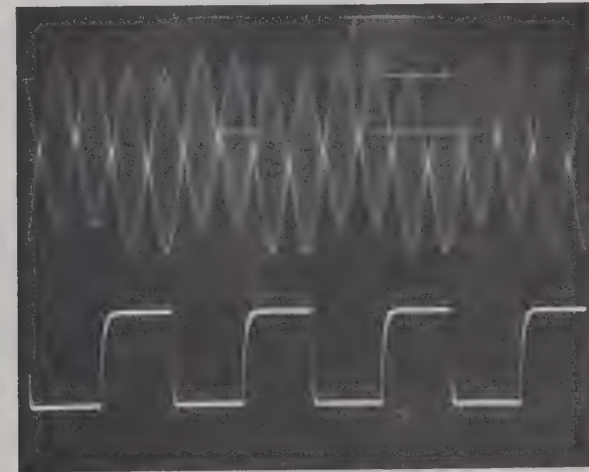


(b) $V=.1V/Div$; $H=20 \mu S/Div$

Fig. 3-10. PLL Phase-Detector Output (Pins 14 and 15) signal



(a) $V=.2V/Div$; $H=.5 \text{ ms}/Div$



(b) $V=.2V/Div$; $H=20 \mu S/Div$

Fig. 3-11. Auxiliary-Circuit Phase-Detector Output (Pins 10 and 11) Signal

4. Troubleshooting the AM Block by Signal Tracing and Injection

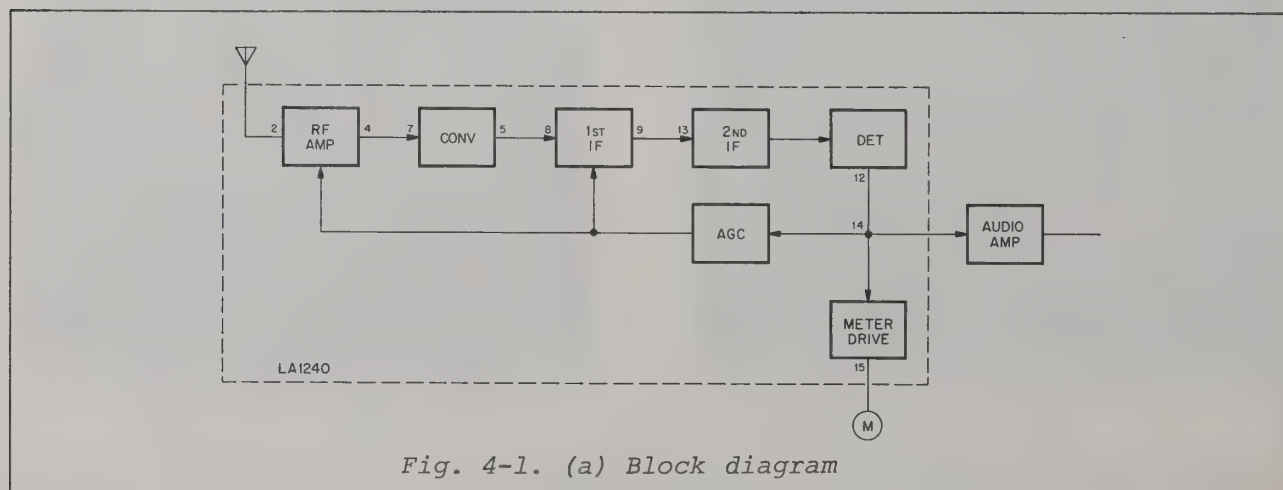
Signal tracing through the AM section of the STR-V4 is relatively easy. The waveforms are familiar to even the least-informed graduate of the radio/TV repair shops, and the frequencies involved are so low that even a 5 MHz scope is sufficient. All of the waveforms in this section were made with an AC-coupled scope equipped with a low-capacitance probe. The lower trace in all photos (where present) is the 400 Hz generator modulating signal. Always trigger your scope from this signal source when signal tracing.

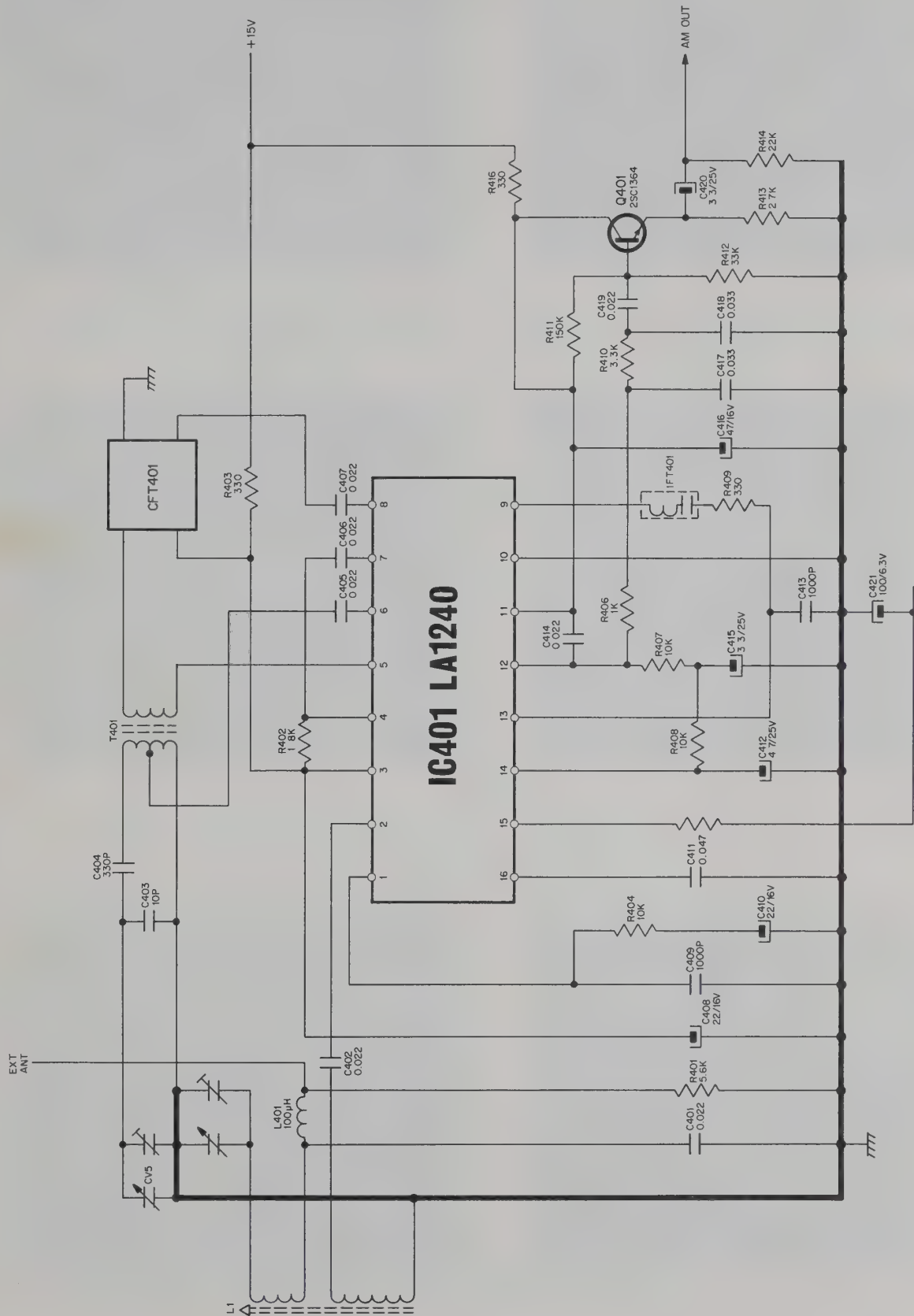
The test signal is 5000 microvolts RF at approximately 1000 kHz, with 50% 400 Hz modulation.

The LA1240 AM IC (Fig. 4-1a) contains all of the active (and many of the passive) components needed to convert modulated RF to audio. As Fig. 4-1b shows, most of the external components in the STR-V4 AM section are frequency selective. To reduce the chance of oscillation caused by the long connecting leads to the outboard components, yet maintain high sensitivity and S/N ratio, the RF stage has an untuned RC-output circuit, much like a video amplifier. The oscillator voltage (pin 6) generated by the converter appears as a near-perfect sine wave (Fig. 4-4) even when a high-frequency scope is used. This spectral purity minimizes spurious responses.

Figures 4-5 and 4-6 show the input and output waveforms of the 1st IF amplifier. Because of the high signal level involved, this stage is operating at greatly reduced gain, so no difference in amplitude is noticeable. In fact, because of the voltage loss in the interstage coupling network (IFT301), the signal level at the input to the 2nd amplifier (Fig. 4-7) is lower than that at the input to the 1st (Fig. 4-5).

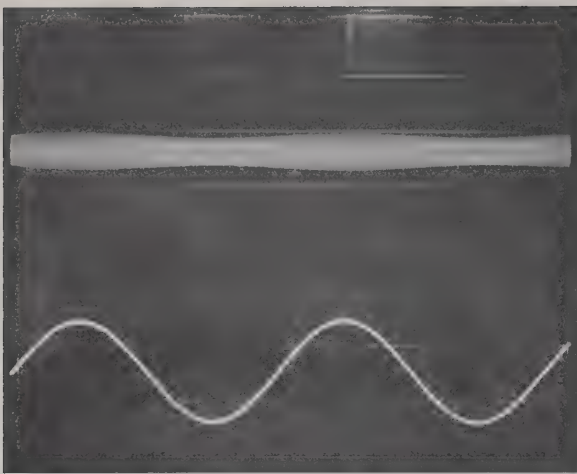
The amplitude at the output of transistor Q401 is almost the same as that shown for the detector output in Fig. 4-8, since Q401 is an emitter follower with close to unity gain. However, the waveform at Q401 will be an even closer match to the 400 Hz reference signal (bottom of all photos) because of the RF filtering action of R406, C417, R410, and C418.





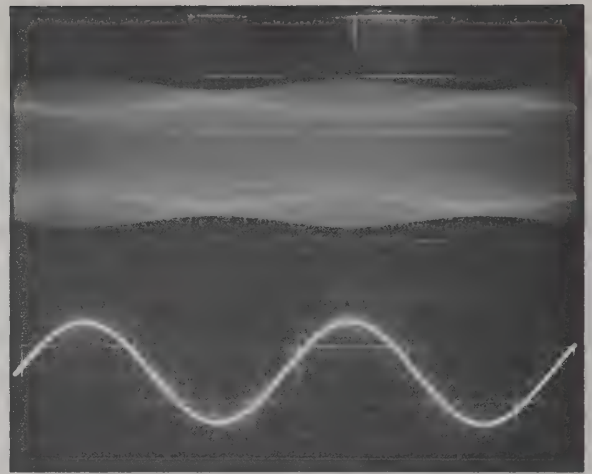
(b) Schematic diagram

Fig. 4-1. STR-V4 AM Block



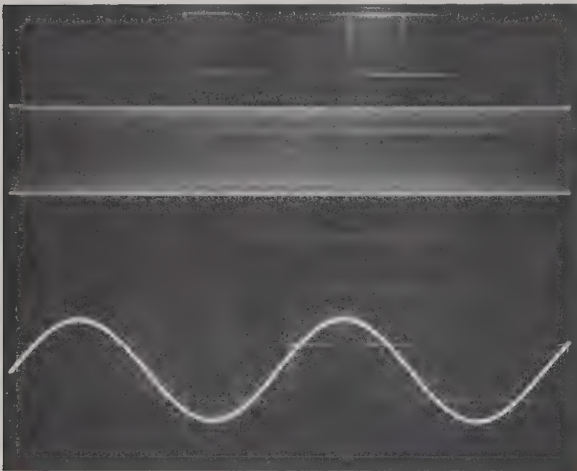
$V = .1V/Div$; $H = .5 \text{ mS}/Div$

Fig. 4-2. RF Amplifier (Pin 4) Output,
Mixer (Pin 7) Input Signal

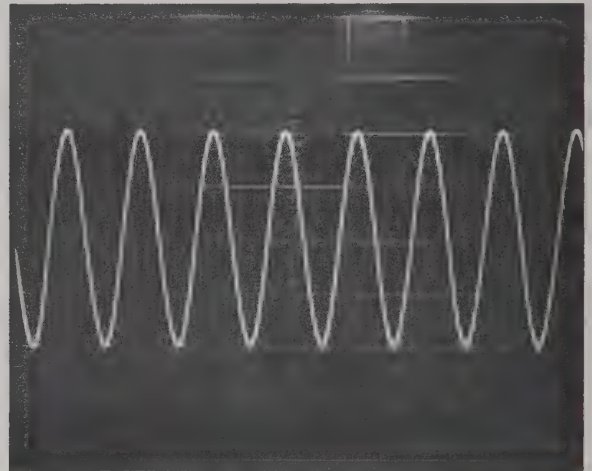


$V = 1V/Div$; $H = .5 \text{ mS}/Div$

Fig. 4-3. Mixer (Pin 5) Output
Signal

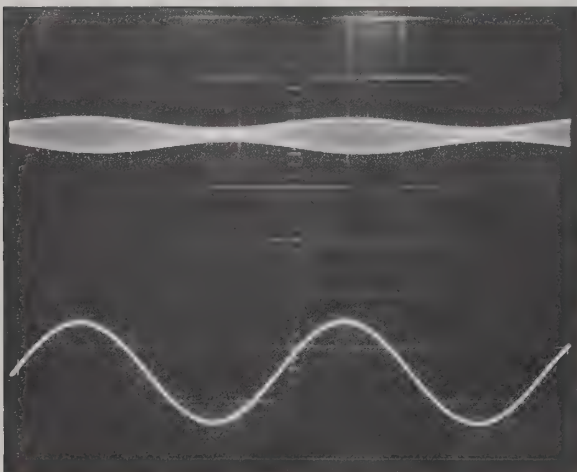


(a) $V = .5V/Div$; $H = .5 \text{ mS}/Div$



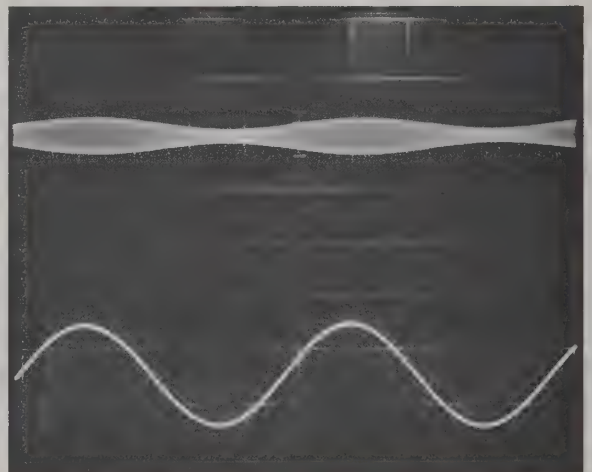
(b) $V = .2V/Div$; $H = .5 \mu S/Div$

Fig. 4-4. AM Oscillator (Pin 6) Signal



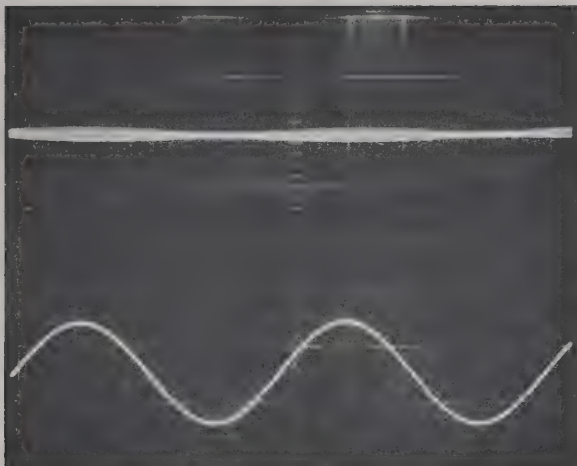
$V = .1V/Div$; $H = .5 \text{ mS}/Div$

Fig. 4-5. 1st IF Amplifier (Pin 8)
Input Signal



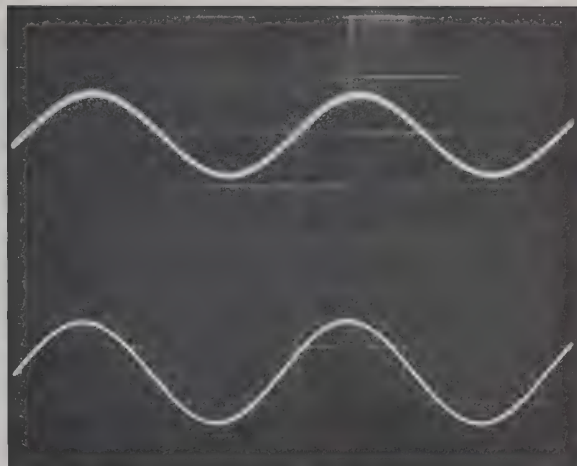
$V = .1V/Div$; $H = .5 \text{ mS}/Div$

Fig. 4-6. 1st IF Amplifier (Pin 9)
Output Signal



$V=.1V/Div$; $H=.5\text{ mS}/Div$

Fig. 4-7. 2nd IF Amplifier (Pin 13)
Input Signal



$V=.5V/Div$; $H=.5\text{ mS}/Div$

Fig. 4-8. Detector (Pin 12) Output
Signal

Signal injection works quite well for the LA1240. In this technique, signal is injected at the last IF stage, and is adjusted to produce 100 mV RMS 400 Hz output at the REC OUT jacks. The signal-injection point is then moved forward and the generator output level is readjusted to produce the same output condition. This is repeated until a point is reached where you get no (or insufficient) output, or very low stage gain. Between that point and the last "OK" test point is the defective stage. Since the LA1240 contains the active devices for all stages in the AM IF strip, this technique actually pinpoints the external (or outboard) components to check before replacing the IC.

The signal generator requirements are as follows: 455 and 1000 kHz output over the level range of 10 microvolts to 20,000 microvolts, with 50% 400 Hz modulation. Nearly any AC voltmeter will do, but one with a scope output is preferred. Prepare the receiver under test and test equipment as follows:

1. Remove the receiver bottom plate to gain access to the foil side of the board.
2. Allow the receiver and test equipment to warm up for about 10 minutes.
3. Connect the signal generator to the input of the IF strip. Make the connection via a 50Ω feed-thru termination and $.01\mu F$ disc-ceramic capacitor (see Fig. 4-9).
4. Connect the AC voltmeter to the REC OUT jacks.
5. Set the signal generator modulation level at 50%, and its carrier frequency at 455 kHz. Then carefully adjust its frequency for maximum output from the receiver.
6. Set the receiver dial pointer near 1000. Be sure to pick a clear spot if you are not working in a shield room.

When performing this procedure, keep in mind that there are big unit-to-unit variations. So look for an outright failure or gross insufficiency in gain (say 1/10th of normal or less), rather than a 20-50% difference. With this in mind, proceed to check point-to-point gain as follows:

1. Connect the generator cable to pin 13 and adjust the generator output level to produce 100 mV RMS 400 Hz output at the receiver REC OUT jacks.
2. Note the injection (generator output) level, and compare it to the "typical" voltage shown on the following chart for that pin. A match $\pm 30\%$ is on the nose; a match within 2:1 is acceptable. A large difference is indicative of a problem.
3. Move the generator cable to the next pin listed on the chart.
4. Adjust the generator output level to produce reference output from the receiver, and record the generator output level. Rock the generator tuning to assure maximum possible output.
5. Divide the previous pin's injection level by the present injection level to find the voltage gain between the two pins. Compare this measured gain with the gain indicated in the chart. A match within ± 30 is on the nose. A difference of over 3:1 is indicative of a problem.
6. Repeat Steps 3-5, determining the stage gains as you work your way toward the front end. Always rock the generator tuning at each new pin to assure maximum output. Also, note the change of frequency at pin 7. The defective stage is the first place where you get no output or the stage gain is far less than specified.

Level and Gain Chart

PIN	FUNCTION	FREQ	SIGNAL LEVEL REQUIRED	GAIN
13	2nd IF amplifier input	455	3,200 μ V	.2X
9	1st IF amplifier output	455	16,000	19X
8	1st IF amplifier input	455	850	.1X
5	Converter output	455	8,600	33X
7	Converter input	455	260	.57X*
7	Converter input	1000	460	0X
4	RF amplifier output	1000	460	22X
2	RF amplifier input	1000	21	.07X
-	Antenna terminal	1000	310	

* Conversion loss from frequency change

NOTES

SONY

3-769-736-22 (3)

VIDEO CAMERA RECORDER **8**

CCD-V9/V90

OPERATING INSTRUCTIONS

Before operating the unit, please read this manual thoroughly and retain it for future reference.



Video8

Handycam PRO

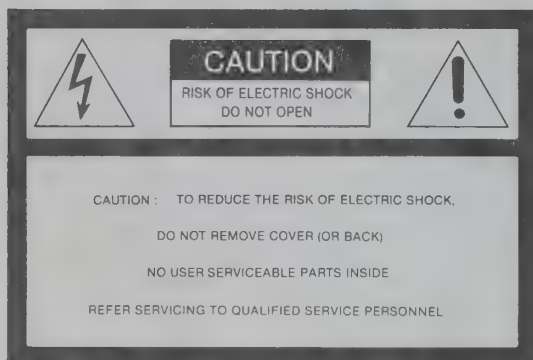
OWNER'S RECORD

The model and serial numbers are located on the bottom. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. CCD-V9 Serial No. 278609

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the equipment with respect to the receiver
- Move the equipment away from the receiver
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems".

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

TABLE OF CONTENTS

This instruction manual covers the CCD-V9 (verified to the FCC rules and available in the U.S.A. and Canada) and the CCD-V90 (models available outside the U.S.A. and Canada). Operations are the same regardless of the difference of the model name.

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HINTS FOR BETTER SHOOTING page 48

The following units are packed with the CCD-V9/V90 video camera recorder.

Battery pack NP-55
AC power adaptor AC-V33
RFU adaptor RFU-89UC/N
Cassette tape
Shoulder strap

For details on these units, please read their instruction manuals.

Please refer to the illustration corresponding to the letter code indicated in the instructions.

NOTES

- For "once-only" events, it is strongly recommended to have a trial run to check that everything is working perfectly.
- Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws.
- PCM recording/playback is not possible with this unit. The PCM sound recorded or after-recorded with another recorder cannot be played back with this unit.
- For using this unit abroad, see page 44.

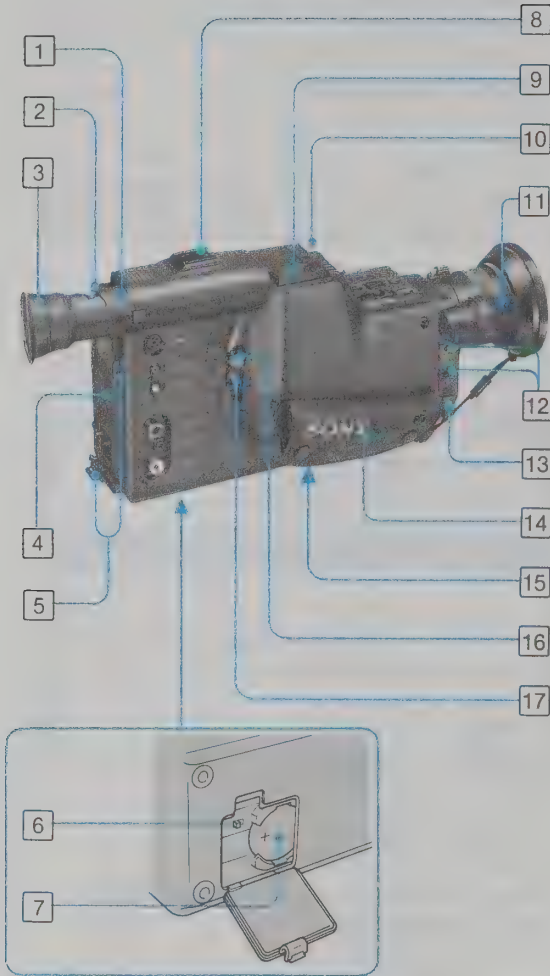
This unit uses 8mm video format cassettes.

It records in the SP mode (approximately 1.43cm/second) and can play back in the SP mode and the LP mode (approximately 0.72cm/second).

The quality of the playback picture in the LP mode, however, will not be as good as that in the SP mode.

LOCATION AND FUNCTION OF PARTS AND CONTROLS

A-1



For details on the use of each control, refer to the pages indicated in the circle.

Video camera section

A-1

1 Viewfinder

The picture being recorded or played back can be monitored in monochrome through this viewfinder. Data such as the function mode, caution indicators, date, time, are also displayed on the viewfinder screen.

2 Viewfinder lens adjustment lever ⑪

Adjust to your eyesight to assure good focus. Be sure to adjust this lever when shooting for the first time.

3 Eyecup ⑪

4 Battery mounting surface ⑧

5 Hooks for shoulder strap

6 EDIT switch ④⑤

Normally keep this switch at the opposite position to the arrow direction. When editing a tape, set to EDIT.

7 Lithium battery compartment ⑫

8 Accessory shoe ④①

Attach an optional external microphone, video light, etc.

9 Power zoom button ②④

Press for smooth power zooming between wide-angle (W) and telephoto (T) positions.

10 White balance sensor

This is the sensor for the auto white balance adjustment. Be careful not to cover it.

11 Built-in microphone

12 MIC jack and DC OUT (microphone power output) jack ④①

Connect an external microphone. The MIC jack accepts Sony "plug-in-power" microphones and supplies power to them.

13 ② (earphone) jack (mini)

14 Grip strap ①

15 Tripod receptacle

Attach an optional tripod.

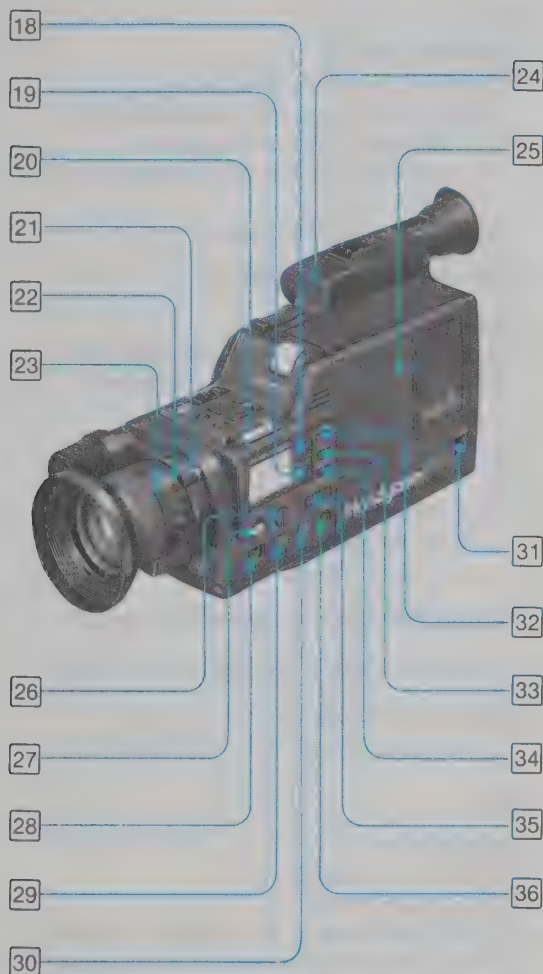
16 STANDBY switch ⑭

Before recording, slide this switch up.

17 START/STOP button ⑭

Press to start or stop camera recording.

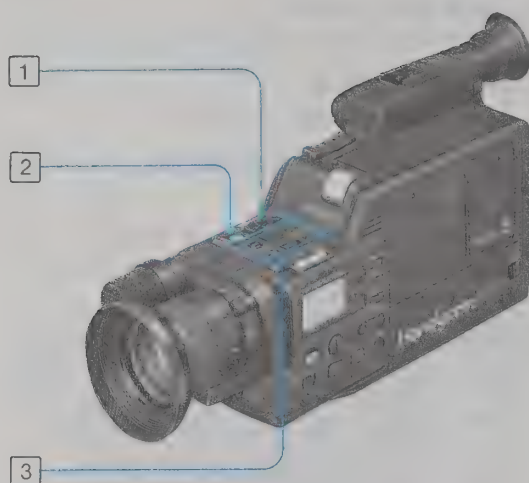
A-2



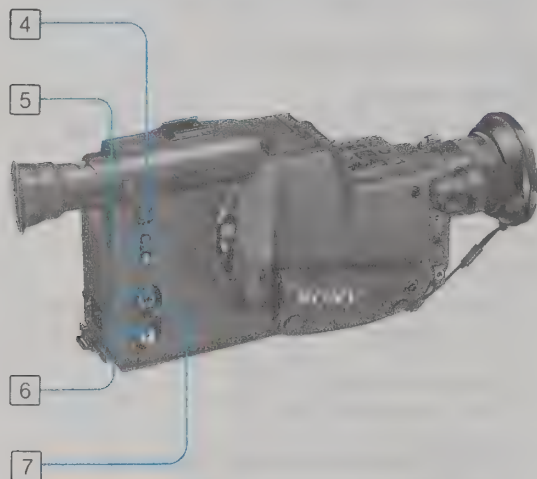
A-2

- 18 DATA SET button 13**
Used to set the date and time.
- 19 ADJUST button 13**
Used to set the date and time.
- 20 EJECT (cassette eject) switch 10**
- 21 Macro set button 25**
Keeping this button depressed, move the manual zoom lever within the MACRO range for close-ups.
- 22 Manual zoom lever 24**
- 23 Focus ring 19**
For manual focusing, turn this ring to focus while looking through the viewfinder. This ring will be turned automatically during auto focusing.
- 24 Camera recording/battery lamp**
Lights during camera recording. It blinks when the battery is exhausted.
- 25 Cassette compartment 10**
- 26 IRIS control 22**
Normally set to the center position (green mark).
- 27 SHUTTER SPEED button 23**
Used to select the shutter speed.
- 28 AUTO LOCK switch 14**
Normally set to the left AUTO LOCK position (green mark).
- 29 FOCUS button 19**
Used for manual focusing.
- 30 WHITE BAL (white balance) button 21**
Used for manual balance adjustment.
- 31 BATT (battery eject) switch 3**
- 32 ZERO MEM (zero memory) button 31 43**
Used to memorize the counter zero point.
- 33 RESET button 31**
Press to reset the counter to zero.
- 34 SELECT button 13 17**
Select the counter, date or time display.
- 35 EDITSEARCH button 15 18 40 43**
- 36 FADER button 25**

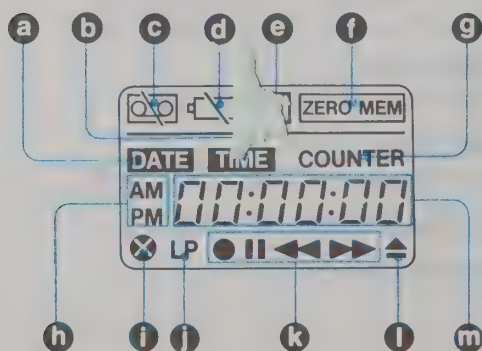
A-3



A-4



A-5



Video cassette recorder section and connectors

A-3

1 POWER switch

CAMERA: For camera recording.

VTR: For tape playback, tape editing and recording from the equipment connected to the VIDEO IN/AUDIO IN jacks.

OFF: To turn off the power.

2 REC ● (recording) button 33

3 Tape transport buttons 29

◀◀ FF (fast-forward), ◀ (playback), ▶▶ REW (rewind), ◀|| (frame-by-frame/slow playback), ■ (stop), || (pause)

A-4

4 REMOTE connector (5-pin) 40

Connect an optional Remote Commander, editing controller, etc.

5 AUDIO IN/VIDEO IN jacks (miniphono) 33

6 AUDIO OUT/VIDEO OUT jacks (phono) 27 33

7 RFU DC OUT jack (special mini) 27 33

Connect the RFU-89UC/N RFU adaptor, etc.

A-5

Display window

a DATE mode indicator

b TIME mode indicator

c Lights steadily when no cassette is inserted. Blinks when the tape reaches its end during camera recording or when a recording is started with a cassette with its safety tab out inserted.

d Blinks when the battery is weak.

e Blinks when moisture has condensed inside the unit.

f Displayed when the ZERO MEM button is pressed.

g COUNTER mode indicator

h AM/PM indicator

i Blinks when the video heads have been contaminated.

j LP mode indicator

k Tape operation mode indicators

● (recording), || (pause), ◀◀ (fast-forward), ▶▶ (rewind), ◀ (playback)

l Blinks when moisture has condensed on the tape, when the tape reaches its end during camera recording, etc. to indicate that the cassette should be removed.

m Tape counter, date or time indication

POWER SOURCES


SELECTION OF POWER SOURCES

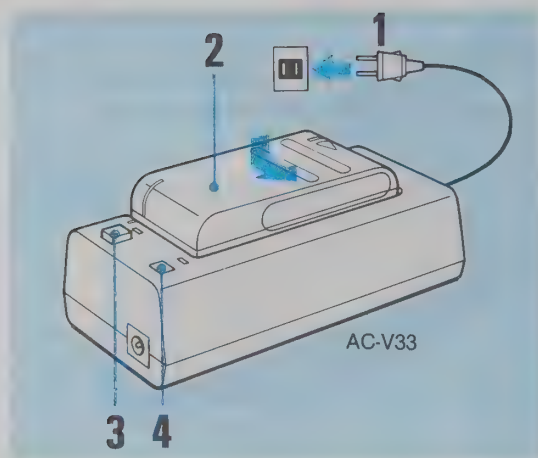
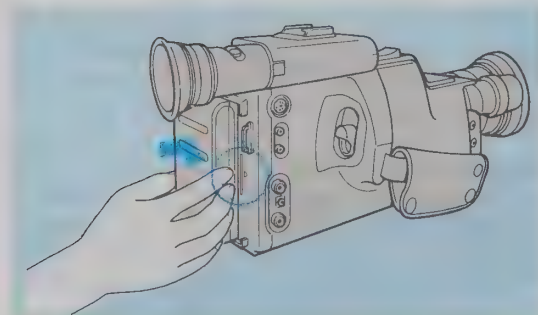
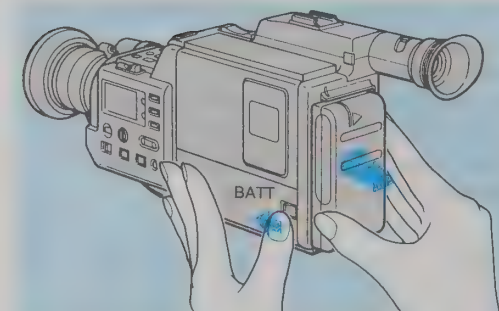
This manual shows the operations on one of the following power sources. For operation on other power sources, see the instruction manual furnished with the equipment to be used.

		Power source	Accessory to be used
Place	Indoors	House current	AC power adaptor AC-V33 or AC-V55 * (page 9)
	Outdoors	Battery pack	Battery pack NP-55 or NP-77 * (page 8)
	In the car	12 V or 24 V car battery	AC power adaptor AC-V55 and car battery cord DCC-16AW (page 9)

* Available in near future.

Notes on power source

- Disconnecting the power source or removing the battery pack during recording or playback may damage the inserted cassette tape. If this is done by accident, supply the power again immediately and turn on the power switch.
- If a power source is disconnected or the CHARGE button on the AC power adaptor is pressed in rewind mode, the  indication may blink in the display window and the tape may not run. In this case, remove the cassette and insert it again.
- Be careful not to let any metal object touched on the metal part on the battery pack or AC power adaptor. When the battery pack is not be used, keep it in its case.

B-1**B-2****B-3****B-4****BATTERY PACK — NP-55 OR NP-77****How to charge [B-1]**

Use the AC-V33 AC power adaptor.

The charging time is about 1 hour for an NP-55 battery pack, or about 2 hours for an NP-77 battery pack.

- 1 Connect the AC-V33 to a wall outlet.
- 2 Attach the battery pack to the AC-V33.
Align the grooves on the battery pack with those on the AC-V33, and while pressing the battery pack, slide it as illustrated.
- 3 Press the POWER button.
- 4 Press the CHARGE button.

To attach the battery pack to the video camera recorder [B-2]

Align the right side of battery pack with the white line on the recorder, and while pressing the battery pack, slide it to the right.

Make sure that the battery is fitted completely to the mounting surface. Imperfect fit may damage the projections on the recorder.

To remove the battery pack [B-3]

While pressing the BATT switch in the arrow direction, slide and pull out the battery pack as illustrated.


Battery life

A fully-charged NP-55 battery pack provides approximately 45 minutes of continuous camera recording, and an NP-77 provides approximately 90 minutes of continuous camera recording.

NOTES

- The video camera recorder consumes power even in the recording pause mode. Therefore, turn off the unit by sliding the STANDBY switch when you are not shooting. For every hour's worth of tape you shoot, plan to use 2 to 3 hours' worth of battery power.
The use of the NP-77 is recommended for an extended use.
- If the battery pack is not fully charged or if it is used in a cold place, its operating time is also shortened.

WHEN THE BATTERY BECOMES WEAK [B-4]

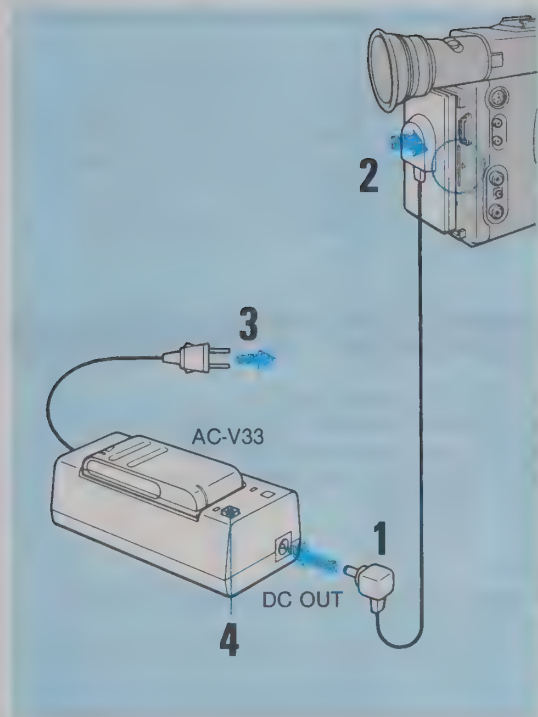
The BATTERY indication blinks on the viewfinder screen and the  indication blinks in the display window. Replace the battery pack with the fully charged one.

USING THE NP-22 BATTERY PACK

A fully-charged NP-22 battery pack can operate this unit for approximately 70 minutes. For using the NP-22, an optional NPA-22 battery adaptor is necessary.

OPTIONAL ACCESSORIES FOR CHARGING

- AC-V55 AC power adaptor
Two battery packs can be charged simultaneously.
- BCA-70 or BCA-80 battery charge adaptor, ACP-80UC or ACP-88 AC pack and NPA-55 battery adaptor
For charging, insert an NP-55 into the NPA-55.

B-5**HOUSE CURRENT — USING AC-V33 AC POWER ADAPTOR [B-5]**

- 1 Insert the connecting cord supplied with the AC-V33 AC power adaptor into the DC OUT jack on the AC power adaptor.
- 2 Attach the connecting plate to the battery mounting surface on the video camera recorder.
- 3 Connect the AC power adaptor to a wall outlet.
- 4 Press the POWER switch on the adaptor.

After using, press the POWER switch on the adaptor again.

To remove the connecting plate from the video camera recorder

While pressing the BATT switch on the recorder, slide and pull out the connecting plate.

- The optional AC-V55 AC power adaptor can also be used to operate this recorder on house current.

CAR BATTERY [B-6]

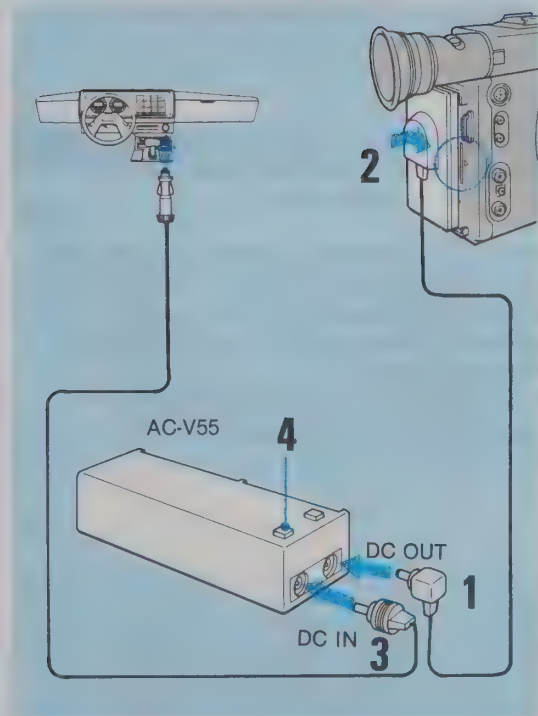
Use the DCC-16AW car battery cord and the AC-V55 AC power adaptor.

- 1 Insert the connecting cord supplied with the AC-V55 into the DC OUT jack on the AC-V55.
- 2 Attach the connecting plate to the video camera recorder.
- 3 Connect the DCC-16AW car battery cord to the DC IN jack on the AC-V55 and to the cigarette lighter socket of a car (12 V or 24 V).
- 4 Press the POWER switch on the AC-V55.

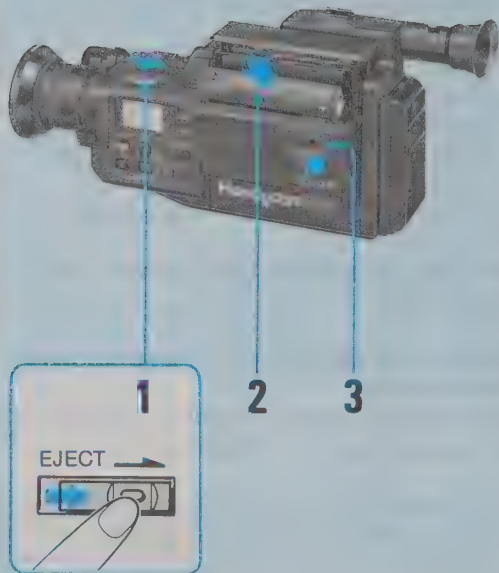
After using, press the POWER switch on the adaptor again.

To remove the connecting plate from the video camera recorder

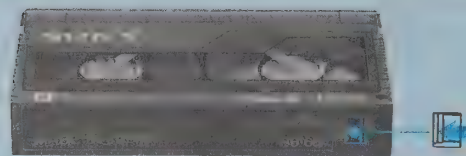
While pressing the BATT switch on the recorder, slide and pull out the connecting plate.

B-6

C-1



C-2



CASSETTE CARE

CASSETTE INSERTION

Make sure that a power source is connected to the unit.

- 1 Press and slide the EJECT switch.
The cassette holder will open.
- 2 Insert a cassette with the window outward and the arrow mark down.
- 3 Push the PUSH mark to close the cassette holder.

CASSETTE EJECTION

- 1 Connect a power source.
- 2 Press and slide the EJECT switch.
- 3 Take the cassette out and push the PUSH mark to close the cassette holder.

NOTES

- While the cassette holder is rising, never pull or push it forcibly.
- When the cassette holder is pressed to close, the upper lid of the cassette compartment will automatically lower. Be careful not to trap your hand between the cassette holder and the lid. To open the cassette holder, press and slide the EJECT button.
- Never insert anything in the small holes on the rear of the cassette. These holes are used to sense the kind of tape, thickness of tape, if the tab is out or in, etc.
- To record from the beginning of the tape, run the video camera recorder for about 15 seconds at the beginning of a cassette before recording. It will avoid missing the starting point during playback on a video cassette recorder.

THE TAB ON THE CASSETTE

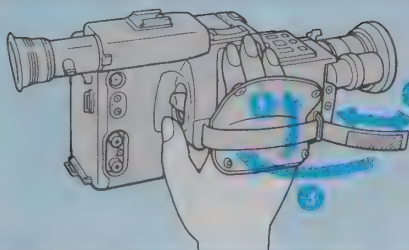
(The photo is of Sony type.)

When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased. To avoid erasing a recording unintentionally, slide the tab out to cover the opening.

When the tab is out, a recording cannot be made. To re-record on a cassette, slide the tab in.

PREPARATIONS FOR CAMERA RECORDING

D-1



GRIP STRAP ADJUSTMENT [D-1]

Adjust the length of the grip strap so that your fingers can manipulate the **STANDBY** switch, **START/STOP** button and power zoom button.

VIEWFINDER ADJUSTMENT

Viewfinder lens adjustment [D-2]

This adjustment is necessary only when you use the camera for the first time or after another person has used it, because the distance of optimum vision varies from person to person.

Make sure that the lens cap is removed.

- 1 Press and slide the **POWER** switch to **CAMERA**.
- 2 Slide the **STANDBY** switch up.
The unit will be set to recording pause mode and the **STBY** indication will appear on the viewfinder screen.
- 3 Adjust the viewfinder lens adjustment lever so that the indication on the viewfinder screen come into sharp focus.

NOTE

When the power is turned on, irregular indications may appear on the viewfinder screen. In this case, set the **POWER** switch to **OFF**, and set it to **CAMERA** again.

To view with your left eye [D-3]

Pull to detach the rubber eyecup and reattach it as illustrated.

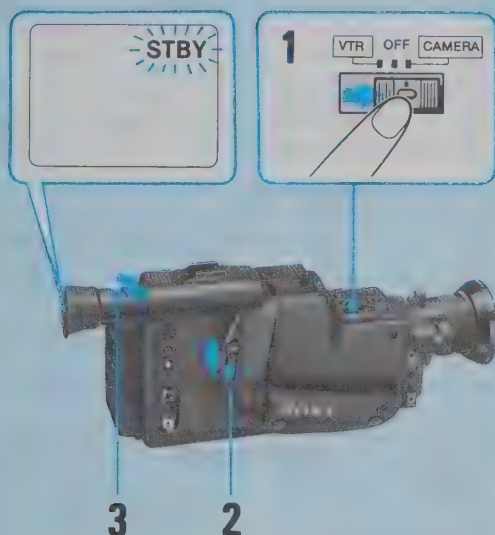
To view through the glasses [D-4]

Fold the rubber eyecup outward.

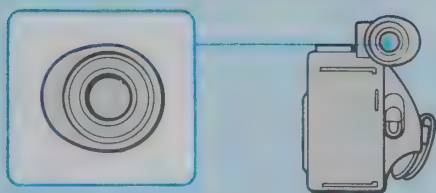
To remove the dust inside the viewfinder [D-5]

Detach the eyecup and clean the screen surface [a] with a camera blower [b] (commercially available).

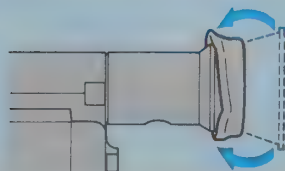
D-2



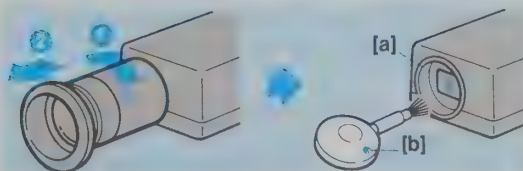
D-3

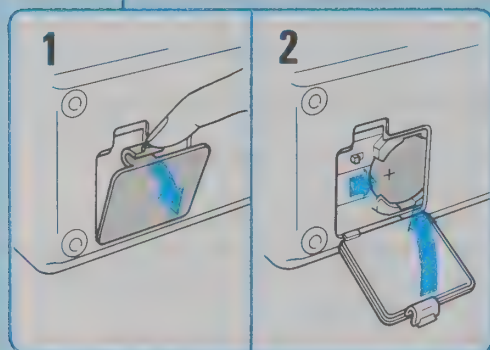
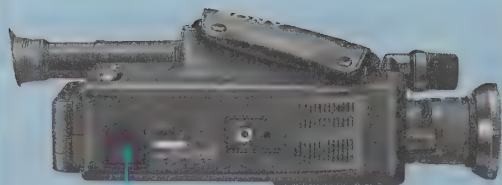


D-4



D-5





LITHIUM BATTERY D-6

Before operating the unit for the first time, install the supplied lithium battery to activate the clock.


- 1 Open the cover of the lithium battery compartment on the bottom.
- 2 Install the supplied CR2025 lithium battery with the ⊕ side facing out.
- 3 Close the cover.

To remove the lithium battery

Press the side of the battery in the direction as indicated for installation.

LITHIUM BATTERY LIFE

Approximately 2 years in normal operation.

When the lithium battery becomes weak, the  indication and the DATE or TIME indication will blink in the display window while the date or time is displayed.

In this case, replace the battery with a Sony CR2025 or Duracell DL-2025 lithium battery. Use of another battery may present a risk of fire or explosion.

NOTES ON LITHIUM BATTERY

- Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.
- Do not break up the battery nor throw it into a fire, which might cause it to explode. Carefully dispose of the used batteries.

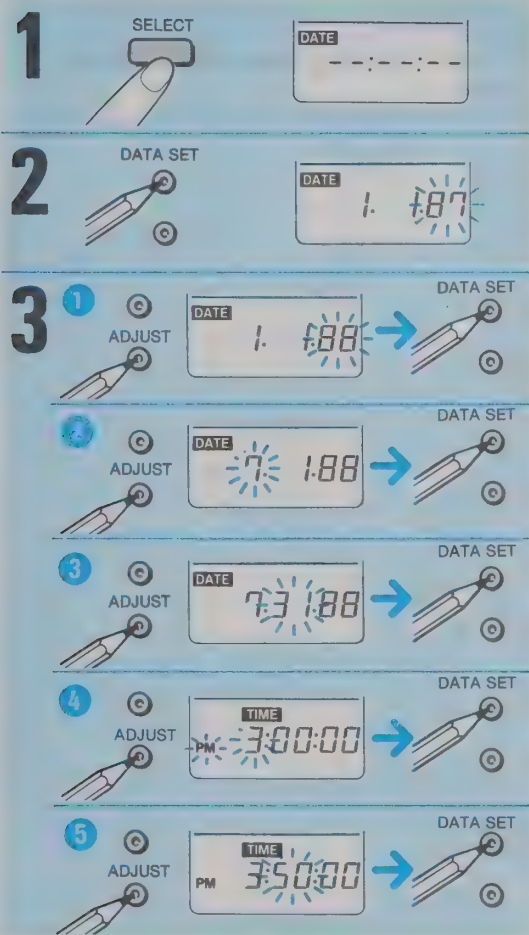
WARNING

Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

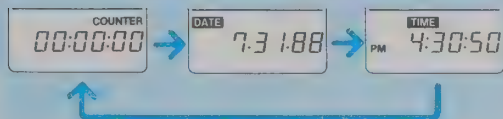
D-7



D-8



D-8



DATE/TIME SETTING [D-7]

Make sure that the lithium battery is installed.

- 1 Press the SELECT button.
The DATE indication will appear on the viewfinder screen.
- 2 Press the DATA SET button for 2 or 3 seconds to display the preset date (1.1.87).
- 3 Adjust the year, month, day, hour and minute in sequence, following the illustration [D-8].
First adjust the blinking digits with the ADJUST button, and then press the DATA SET button.
① Year: 87 = 1987, 00 = 2000 ② Month
③ Day ④ Hour: AM12:00 = midnight, PM12:00 = noon ⑤ Minute
After adjusting the minute digits, press the DATA SET button at the same time with an announced time signal.
The clock starts operating.
- 4 To reset to the counter mode, press the SELECT button.

There is no need to readjust the date and time as long as the lithium battery remains.

THE ADJUST BUTTON CAN BE PRESSED IN TWO WAYS:

- When you keep the button pressed, the digits will advance continuously.
- When you press and immediately release the button, the digits will advance by one.

To change the adjusted digits during setting

- 1 Press the DATA SET button repeatedly until the clock starts operating.
- 2 Press the DATA SET button for 2 or 3 seconds so that the year digits blink.
- 3 Press the DATA SET button repeatedly until the digits to be changed blink.
- 4 Change the digits with the ADJUST button and then press the DATA SET button.

To readjust the date or time after the setting has been completed

- 1 Press the SELECT button to display the date or time.
- 2 Press the DATA SET button for 2 or 3 seconds so that the year digits blink.
- 3 Press the DATA SET button repeatedly until the digits to be changed blink.
- 4 Change the digits with the ADJUST button and press the DATA SET button repeatedly until the clock starts operating.

To check the date and time [D-9]

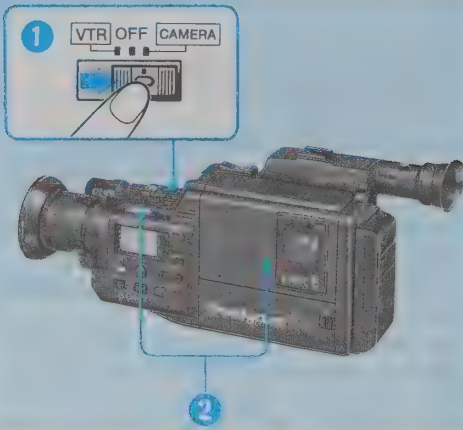
Each time the SELECT button is pressed, the display changes as follows:

Counter → Date → Time → Counter...

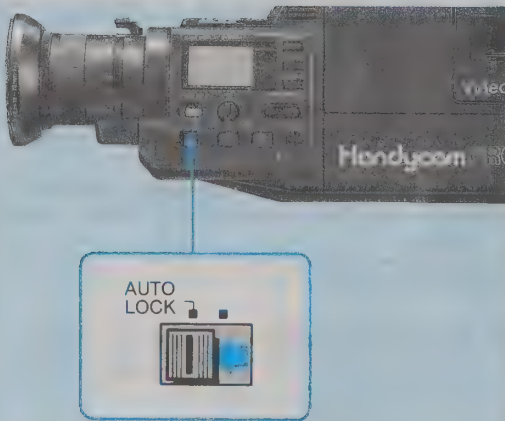
CAMERA RECORDING

- 1 Press and slide the **POWER** switch to **CAMERA** and insert a cassette. **[E-1]**
- 2 Set the **AUTO LOCK** switch to the left (green **AUTO LOCK** position). **[E-2]**
In this position, the focus, white balance and iris will be adjusted automatically.
- 3 Slide the **STANDBY** switch up. **[E-3]**
The unit will be set to recording pause mode.
- 4 To start recording, press the **START/STOP** button. **[E-4]**
- 5 To stop recording, press the **START/STOP** button.
The unit will be set to recording pause mode.

E-1



E-2

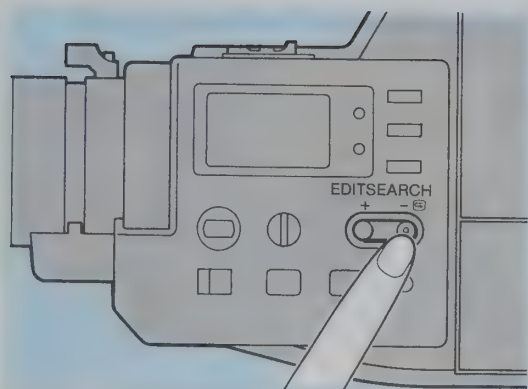


E-3




E-4



E-5

To check the last scene of the previous recording

Press the “” side of the EDITSEARCH button momentarily. **E-5**

The last few seconds of the recorded scene are played back in reverse, and then played back normally. Then the unit will enter recording pause mode.

After recording

Slide the STANDBY switch down and set the POWER switch to OFF.

NOTES ON RECORDING

- Do not let the sun shine directly into the eyecup of the viewfinder, because the plastic inside the viewfinder may be damaged.
- If you leave the unit in the recording pause mode for 7 minutes or more, the power will be automatically turned off.
To resume recording pause mode, slide the STANDBY switch down and slide it up again.
- Avoid mechanical shock or shaking of the unit in recording pause mode. Otherwise, smooth recording will not be obtained when recording is resumed.
- When the POWER switch is moved during recording, the tape will stop.
- Should you shoot a subject in bright conditions such as sunlight just after shooting in a dark place, the picture may not appear on the viewfinder screen. In this case, move the camera away from the subject to resume the normal condition.
- A vertical band may appear when a subject such as a candle flame or a light is shot against a dark background.
- When playing back a tape recorded with this unit on a VCR equipped with PCM function, set the audio monitor selector on the VCR to the standard position.
- When a new recording is made with this unit using a tape on which PCM stereo sound has previously been recorded, set the monitor switch of the video cassette recorder for playback to the STD (standard) position. Otherwise, the sound may not be heard or may be distorted.

NOTES ON AUTOMATIC ADJUSTMENT

- During camera recording, do not touch the focus ring or cover the white balance sensor.
- If there is insufficient light, the auto focusing and auto white balance do not operate properly. Add an appropriate light.
- The camera recording with automatic adjustment may not produce optimum results under certain conditions or ambient lighting. In this case, manually adjust the focus, white balance and iris. See pages 19, 21 and 22.
- The shutter speed is fixed at normal and the fader does not function in AUTO LOCK position.

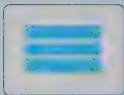
CAUTION INDICATORS ON THE VIEWFINDER SCREEN **E-6**

A caution indicator will be displayed on the viewfinder screen.

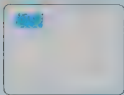
[a]	BATTERY	Blinks, then goes out.	The battery is weak.
	TAPE END	Blinks.	The tape reaches its end.
	CASSETTE	Blinks.	<ul style="list-style-type: none"> No cassette inserted. The safety tab is out. (page 10)
	DEW	Blinks.	Moisture condensation inside the unit. (page 42)
	CAUTION	Blinks.	Moisture condensation on the tape surface, etc. (page 42)
[b]	INDOOR	Lights.	The WHITE BAL button is set for indoor recording. (page 21)
	OUTDOOR	Lights.	The WHITE BAL button is set for outdoor recording. (page 21)
[c]	White mark	Lights.	Manual focusing mode is set. (page 19)
		Blinks.	Auto focusing does not work correctly. (page 19)
[d]	RED lamp	Lights.	During recording.
		Blinks.	Battery is weak.

E-6

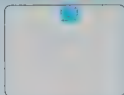
[a]



[b]



[c]



[d]



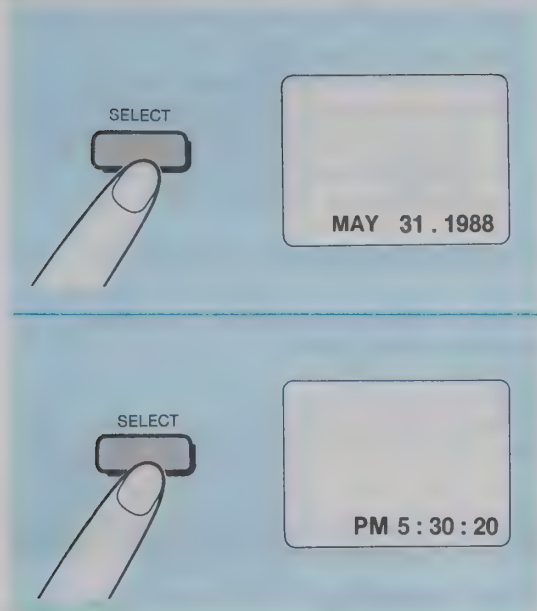
During camera recording or in recording pause mode, press the SELECT button once or twice to display the date or time on the viewfinder screen.

If the unit is set to recording mode, the date or time being displayed will be recorded together with the picture.

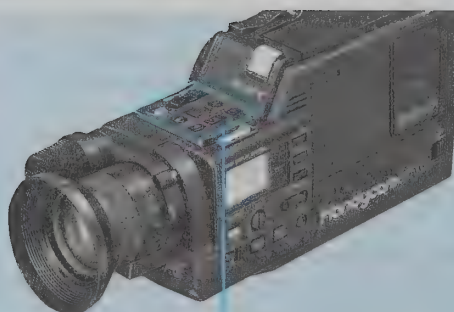
To stop recording the date or time, press the SELECT button twice or once to extinguish the display. The picture recording will continue.

NOTES

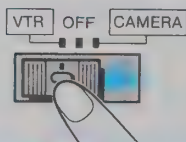
- The date or time can be recorded only during a camera recording. To insert the date or time while editing a tape, see "INSERT RECORDING" on page 38.
- To display the time or to extinguish the date during recording, press the SELECT button twice **in succession** to pass over the unnecessary date or time display rapidly. Otherwise, the unnecessary display will be recorded. When the SELECT button is pressed in succession, such a display will appear momentarily but will not be recorded.



E-8



1



2



3



4



MONITORING THE PLAYBACK PICTURE ON THE VIEWFINDER SCREEN E-9

- 1 Set the POWER switch to VTR.
- 2 Press the ►► button to rewind the tape.
- 3 Press the ■ button to stop the tape.
- 4 Press the ◀ button to start playback.
The playback picture will appear on the viewfinder screen.

To stop the playback, press the ■ button.

To monitor the playback sound, connect an earphone to the Ⓢ jack.

NOTE

The playback picture and sound may be affected in a moving vehicle.

SMOOTH RECORDING

Smooth recording can be made even if the recording is stopped and started again, or even if the power is turned off and on again, provided that the cassette is not removed. But, if the cassette has been removed, proceed as follows.

- 1 Set the POWER switch to CAMERA.
- 2 Insert a cassette.
- 3 Slide the STANDBY switch up.
- 4 Locate the point from which the recording is to begin again by monitoring the picture on the viewfinder screen. E-9

① Press the "+" side of the EDITSEARCH button to advance the picture at a normal playback speed, or the "-" side to reverse the picture.

② At the desired point, release the EDITSEARCH button.

The unit will be set to recording pause mode after 2 seconds.

- 5 Press the START/STOP button to start recording.

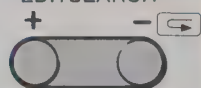
NOTE

Smooth recording cannot be obtained if two recordings are carried out on different VCRs, on this unit and another VCR.

E-9



EDITSEARCH

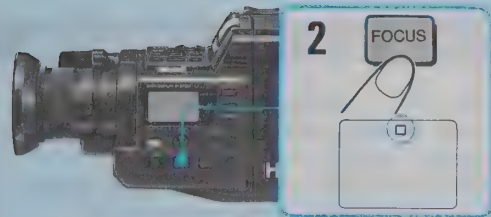


MANUAL FOCUSING

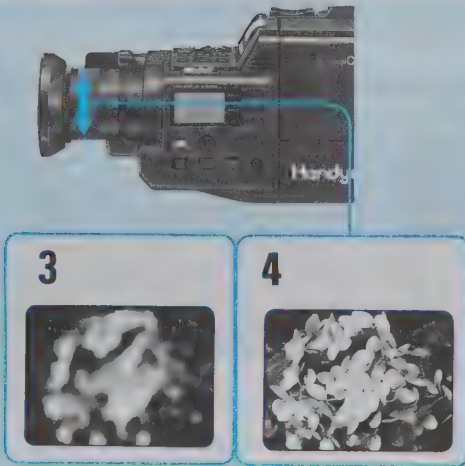
F-1



F-2



F-3



F-4



Auto focusing will be activated for almost any subject centered in the viewfinder. However, for some subjects listed on page 20, or when the white mark blinks on the center top of the viewfinder screen, use manual focusing.

- 1 Set the AUTO LOCK switch to the right position (white mark). [F-1]
- 2 Press the FOCUS button so that the white mark appears on the center top of the viewfinder screen. [F-2]
- 3 Turn the manual zoom lever to the telephoto position (72) to make the subject as large as possible in the viewfinder. [F-3]
- 4 Turn the focus ring to achieve sharp focus. [F-3]
- 5 Set the desired shot length using the manual zoom lever. [F-4]

SOME HELPFUL HINTS

- When shooting a scene with lots of movement in bright light, the subject can be kept in good focus regardless of movement by setting the zoom lever to 12 and the focus ring to 2 m.
- The figures on the focus ring indicate the distance between the subject and the ϕ mark on the side of the recorder body.
- When shooting in low lights situations, such as indoors, the depth of field for proper focus becomes very shallow. For best results, set the focus in telephoto, and shoot at wide angles.

F-5

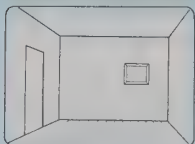
[a]



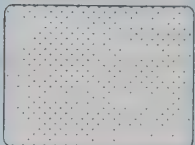
[b]



[c]



[d]



[e]



[f]



[g]



DIFFICULT CONDITIONS FOR AUTO FOCUSING

- [a] Insufficient light
- [b] Too much bright light behind the subject
- [c] Subjects with flat colors and less contrast—wall, sky, etc.
- [d] Finely detailed repetitive patterns
- [e] Slant stripes
- [f] When the distance between subjects at the center is extreme (e.g. one subject is close, the other is away)
- [g] Subjects beyond screens, nets, etc. or when another subject passes across the camera

OTHER USES OF MANUAL FOCUSING

- When using special effects lenses or filters
- When shooting still subjects on a tripod
- To save battery wear
(When the AUTO LOCK switch is set to the green mark position, the auto focusing operates to move the focus ring automatically even in recording pause mode. This causes the battery to wear continuously.)
- For close-up shooting (See page 25.)
- When shooting in a hot place.

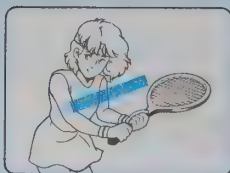
TCL AUTO FOCUSING SYSTEM

The TCL (Through Camera Lens) auto focusing system incorporated in this unit utilizes high-precision sensors to determine picture contrast at the center of the viewfinder screen (the portion marked with the blue bar in the illustration) and adjust focus accordingly for automatic, highly accurate focusing. **F-6**

NOTE

It may take several seconds to get focus when the camera is rapidly panned from a near subject to a distant subject with less contrast.

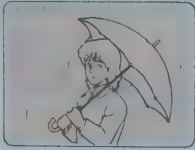
F-6



MANUAL WHITE BALANCE

G-1

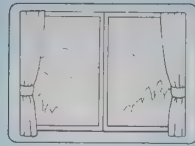
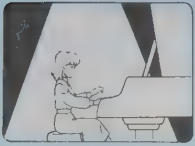
[a]



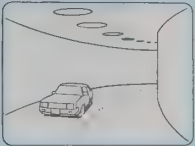
[b]



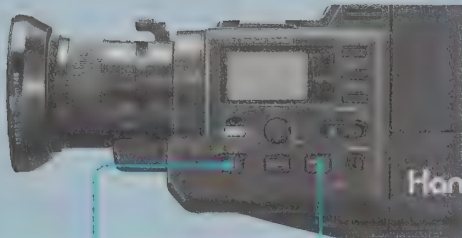
[c]



[d]



G-2



1

AUTO
LOCK



2

WHITE
BAL



[a]



[b]



In most cases, the auto white balance function of this unit adjusts the white balance automatically. However, if it does not work correctly in the conditions listed below, adjust the white balance manually.

DIFFICULT CONDITIONS FOR AUTO WHITE BALANCE [G-1]

- [a] Insufficient light
- [b] When lighting conditions change quickly
- [c] When the light source for the subject is different from that illuminating this unit e.g. when the subject is in a spotlight, or when the subject is outdoors but the camera is indoors, etc.
- [d] Special light sources such as sodium lamps, the setting sun, etc.

TO ADJUST THE WHITE BALANCE MANUALLY [G-2]

- 1 Set the AUTO LOCK switch to the right position (white mark).
- 2 Press the WHITE BAL button once or twice so that the appropriate white balance indicator appears on the viewfinder screen.
 - [a] To record subjects indoors: **INDOOR** (3,200 K)
 - [b] To record subjects outdoors: **OUTDOOR** (5,800 K)

Recommended setting for various subjects

OUTDOOR: sunset, fireworks, subjects in a sunny window, etc.

INDOOR: candle flames in darkness, subjects in the spotlight, scenes before sunrise, subjects in a tunnel (illuminated by sodium lamps), neons, etc.

WHAT IS THE WHITE BALANCE?

The color of the subject being recorded can be affected by the ambient light. White balance adjustment is necessary for compensating for this color variation, so that a white subject, for example, can be recorded white without reference to the light source.

AUTO WHITE BALANCE SYSTEM

The auto white balance system of this unit utilizes the white balance sensor to determine the color temperature of the ambient light and adjust the white balance accordingly. As the ambient lighting condition changes gradually, such as in twilight, the white balance will be readjusted automatically. As the sensor is built in the unit, however, optimum white balance adjustment cannot be obtained if the subject and this unit are under different lighting conditions.

MANUAL IRIS ADJUSTMENT [H]

H



1

AUTO
LOCK



2

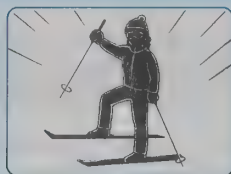
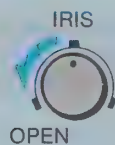
IRIS



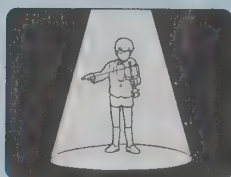
OPEN

CLOSE

[a]



[b]

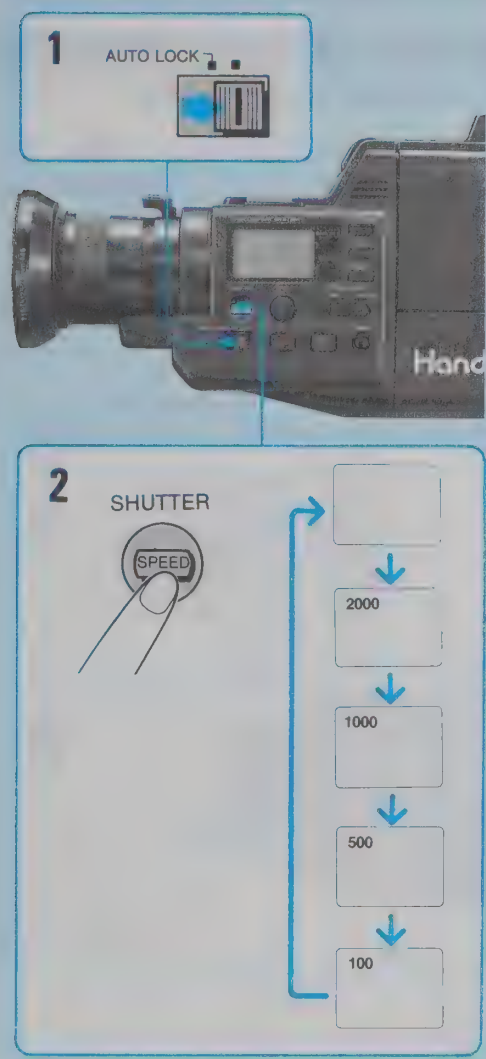


The iris is adjusted automatically when the AUTO LOCK switch is set to AUTO LOCK. When shooting a scene with strong contrast, adjust the iris manually.

- 1 Set the AUTO LOCK switch to the right position (white mark).
- 2 Adjust the IRIS control.
 - [a] When backlit shot results in the subject being too dark: **Turn IRIS toward OPEN.**
 - [b] When a subject is too bright against a dark background: **Turn IRIS toward CLOSE.**

After shooting that particular scene, set the IRIS control to the center position (green mark).

I-1



SHUTTER SPEED ADJUSTMENT

When the shutter speed is fast, subjects moving at high speed, such as a moving golf ball or tennis ball, can be recorded clearly. Five shutter speeds can be selected on this unit: 1/60 (normal speed), 1/2000, 1/1000, 1/500, 1/100. Select the appropriate shutter speed according to the subject and the ambient lighting conditions.

TO SELECT THE SHUTTER SPEED

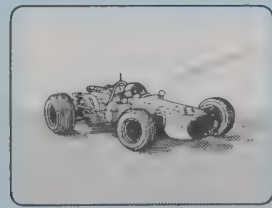
- 1 Set the AUTO LOCK switch to the right position (white mark).
- 2 Press the SHUTTER SPEED button repeatedly until the desired shutter speed indication appears on the viewfinder screen. Each time the SHUTTER SPEED button is pressed, the indication changes:
No indication → 2000 → 1000 → 500 → 100
(1/60) (1/2000) (1/1000) (1/500) (1/100)

Recommended shutter speed settings

The faster the shutter speed is, the better faster movements of the subjects can be followed but the recorded picture becomes darker. Select the appropriate shutter speed while observing the brightness of the picture on the viewfinder screen.

Location	Recommended shutter speed
<ul style="list-style-type: none">• Sunny golf courses and tennis courts• Snow-covered mountains• Beach in summer	1/2000
<ul style="list-style-type: none">• Slightly overcast outdoors• Roofed golf practice ground	1/1000
<ul style="list-style-type: none">• Cloudy outdoors• Indoor tennis courts	1/500 or 1/100

I-2



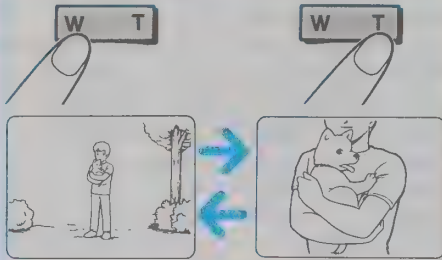
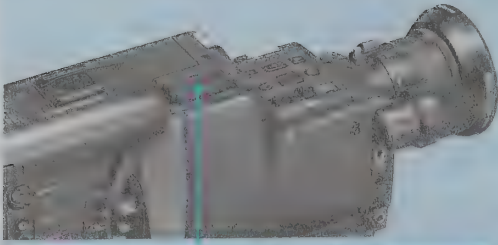
A noiseless still, frame-by-frame and slow pictures are obtained when the picture recorded with the faster shutter speed is played back. This is convenient for checking your golf or tennis form, etc.

NOTES

- When the shutter speed is changed during a camera recording of a TV screen, the brightness of the recorded picture may vary in a single image. I-2
- When a very bright object is shot with a faster shutter speed, a light, vertical, belt-like line ("smear") may appear on the screen. This is not a failure of the unit.
- When shooting under fluorescent lamps, mercury lamps or sodium lamps, flickers may occur and the color of the subjects may change.
- If flickers of fluorescent lamps affect the recording in 50 Hz areas, set the shutter speed to 1/100.

ZOOMING

J-1



POWER ZOOM [J-1]

—for smooth and constant zooming

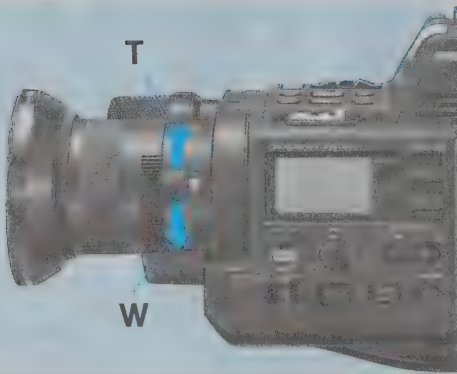
Press the “T” side of the power zoom button for telephoto (T) and the “W” side for wide-angle (W). The zoom ring will move automatically.

MANUAL ZOOM [J-2]

—to create a dramatic effect

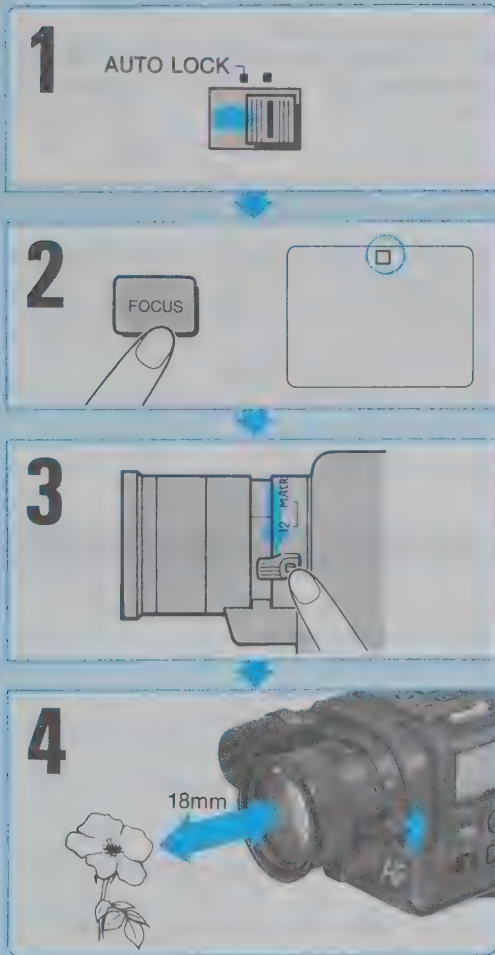
Turn the manual zoom lever upward for telephoto (T) and downward for wide-angle (W).

J-2



CLOSE-UPS (Macro) K

K



Use of the macro function allows the camera to approach the subject almost to the lens, so that even tiny objects can literally fill the screen for dramatic close-up effects.

Remove the lens hood before operation.

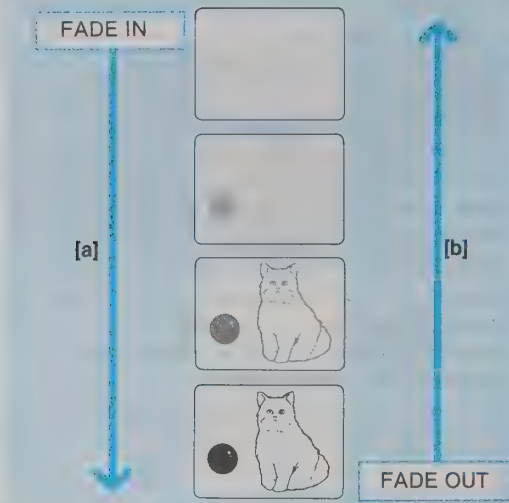
- 1 Set the AUTO LOCK switch to the right position (white mark).
- 2 Press the FOCUS button so that the white mark appears on the center top of the viewfinder screen.
- 3 While keeping the green macro set button pressed, turn the manual zoom lever to the MACRO position.
- 4 Focus by turning the manual zoom lever within the MACRO range.

The recorder can move to a subject as close as 18 mm ($23/32$ in.) from the lens surface.

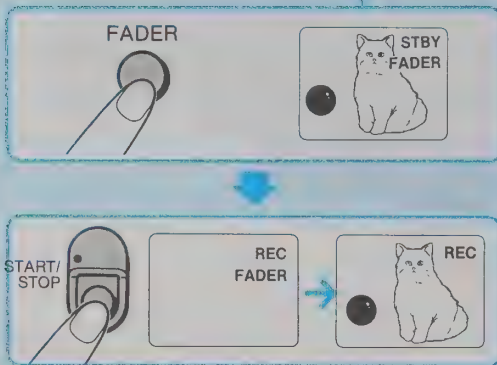
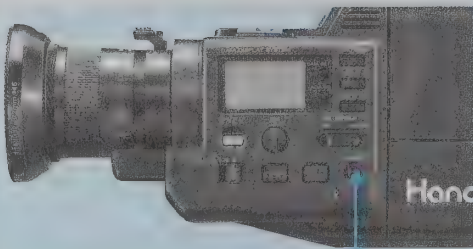
NOTES ON MACRO SHOOTING

- When shooting in macro, the depth of field is very shallow, so pay attention to focus. To keep the subject in focus, use a tripod or monopod.
- Zooming is not possible during macro shooting. To change the size of the subject, move the video camera recorder closer or further away from it.
- Auto focusing does not function during macro shooting.
- When removing and attaching the lens hood, hold the focus ring.

L-1



L-2



L-3



With fade-in, the picture and sound will appear gradually from a white, silent scene. [a]
With fade-out, the picture and sound will disappear gradually. [b]
Dramatic effects can be added by using fade-in at the beginning of a recording and fade-out at the end.

TO FADE IN L-2

- 1 Slide the **STANDBY** switch up to set the unit to recording pause mode.
- 2 Set the **AUTO LOCK** switch to the right position (white mark).
- 3 Press the **FADER** button.
- 4 Press the **START/STOP** button to start camera recording.
Fade-in will be performed.

TO FADE OUT L-3

- 1 Set the **AUTO LOCK** switch to the right position (white mark).
- 2 Start camera recording.
- 3 Press the **FADER** button.
- 4 At the point where fade-out is to be started, press the **START/STOP** button.
Fade-out will be performed and then recording will stop.

To cancel FADER mode before fade-in or fade-out

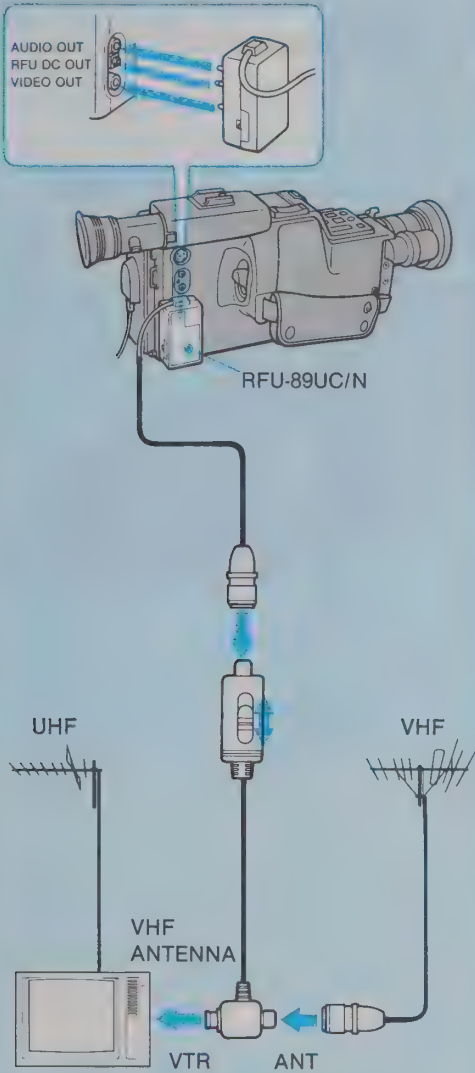
Press the **FADER** button so that the **FADER** indication disappears.

NOTES

- The **FADER** button does not function while the **STBY** indicator is blinking on the viewfinder screen immediately after the **POWER** switch has been set to **CAMERA**. Wait until the **STBY** indicator lights.
- The **FADER** mode is cancelled automatically once fade-in or fade-out has been performed.

PLAYBACK OF THE RECORDED TAPE

M-1



CONNECTING A TV

Connecting a TV without audio/video input connectors **M-1**

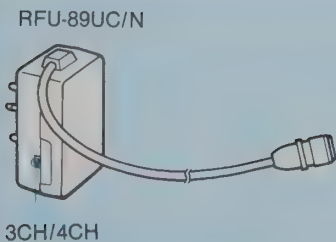
- 1 Connect the RFU-89UC/N RFU adaptor to the CCD-V9/V90.
- 2 Connect the VHF antenna, CCD-V9/V90 and TV to the antenna selector (supplied with the RFU-89UC/N).
Use a 75-ohm coaxial cable for antenna connection.
- 3 Set the selector switch on the antenna selector as follows:

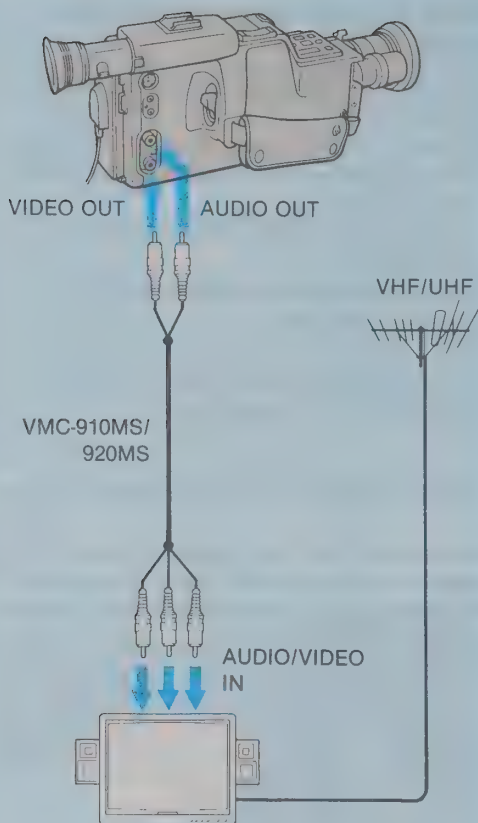
For viewing a playback picture → VTR
For viewing TV programs → ANT

On the TV channel for the video camera recorder **M-2**

Whenever you view the playback picture, set the channel selector of the RFU-89UC/N to either VHF channel 3 CH or 4 CH and select the same channel on the TV.

M-2



M-3**Connecting a TV (or Component TV) equipped with audio/video input connectors** **M-3**

Leave the TV antenna cable connected to the TV.

- 1 Connect the CCD-V9/V90 to the TV using the optional VMC-910MS/920MS audio/video cable.
- 2 Set the TV/VIDEO selector button on the TV as follows:

For viewing a playback picture → VIDEO
For viewing TV programs → TV



TO PLAY BACK

- 1 Turn on the TV or Component TV, and select the channel for the video camera recorder or set the TV/VIDEO select button to VIDEO.
- 2 Set the POWER switch to VTR.
- 3 Insert a cassette.
- 4 Press the ◀ button. Playback begins.

To stop playback, press the ■ button.

When the tape comes to its end, the unit is automatically set to stop mode.

VARIOUS PLAYBACK MODES

To obtain a still picture

Press the ■ button during playback. To resume normal playback, press the ◀ button or press the ■ button again.

When the pause mode lasts for more than approximately 7 minutes, the pause mode will be automatically released and the unit will be set in the stop mode.

Frame-by-frame playback

Press the ◀■ button in still picture mode. If the ◀■ button is kept depressed, a slow motion picture at 1/10 normal speed is obtained. To resume normal playback, press the ◀ button.

To view the picture at high speed

Keep pressing the ◀◀ (fast-forward) or ►► (rewind) button during playback. Release the button for normal playback.

To view the picture in fast-forward or rewind mode

Press the ◀◀ (fast-forward) button in fast-forward mode or press the ►► (rewind) button in rewind mode. The picture is displayed while the button is kept pressed. Release the button to resume normal fast-forward or rewind mode.

NOTES

- Streaks will appear in high-speed playback mode. The sound will be muted in the still picture, frame-by-frame playback and high-speed playback modes.
- The playback picture quality of a tape recorded in LP mode is inferior to that of an SP-recorded tape. Streaks will appear in the still picture, frame-by-frame or slow playback modes for an LP-recorded tape.
- If the position of the POWER switch is changed during playback, the tape will stop.
- If the POWER switch is slid to CAMERA, the unit will be set to recording pause mode.

M-5



To adjust the frame-by-frame and slow playback pictures **M-5**

In slow playback mode, press the "+" or "-" side of the EDITSEARCH button until a clear picture is obtained.

Repeat adjusting until a still picture is displayed clearest.

To adjust the still picture

If the still picture appears to shake, press the "+" or "-" side of the EDITSEARCH button until the picture stabilizes.

NOTE

The adjustment is retained in memory as long as the lithium battery is installed. Readjustment is only required when the equipment used for playback is changed or when tapes recorded on other equipment are played back on this unit. The noise may not be eliminated completely when a tape recorded on other equipment is played back in still or slow picture mode.

USE OF THE TAPE COUNTER

During recording or when a tape recorded in the SP mode is played back, the digits on the counter indicate the actual recording or playback time. When a tape recorded in LP mode on another recorder is played back on this unit, the counter counts approximately half the actual playback time.

E.g. When the counter indicates "0:15:20" during playback of an LP-recorded tape, the tape was played back for approximately 30 minutes 40 seconds from the counter zero position. [N-1]

The counter reading is the same as above in rewind and fast-forward modes, and also in the display window on the optional RM-94 Remote Commander and RM-E100V editing controller.

TO INDEX THE WHOLE TAPE

Press the RESET button at the beginning of the tape so that the counter shows "0:00:00". By noting the counter reading at a particular point, you can easily find that point later by referring to the tape counter.

NOTES

- The counter reading and the point of the tape may not correspond exactly.
- The counter also operates for a blank, unrecorded portion of a tape.
- There will be a time lag of several seconds on the counter reading after repeated fast-forward and rewind operations or after playing back in slow mode for a long time.

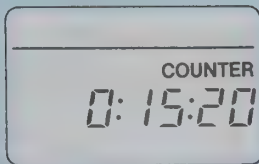
TO RETURN TO A PRE-REGISTERED POINT [N-2]

- 1 During recording or playback, press the RESET button at the point you later want to locate.
- 2 Press the ■ button when the recording or playback has finished.
- 3 Press the ZERO MEM button. The "ZERO MEM" indicator will blink in the display window.
- 4 Press the ►► or ◀◀ button. The tape will be rewound or sent forward and stop automatically when the counter reaches approximately zero.

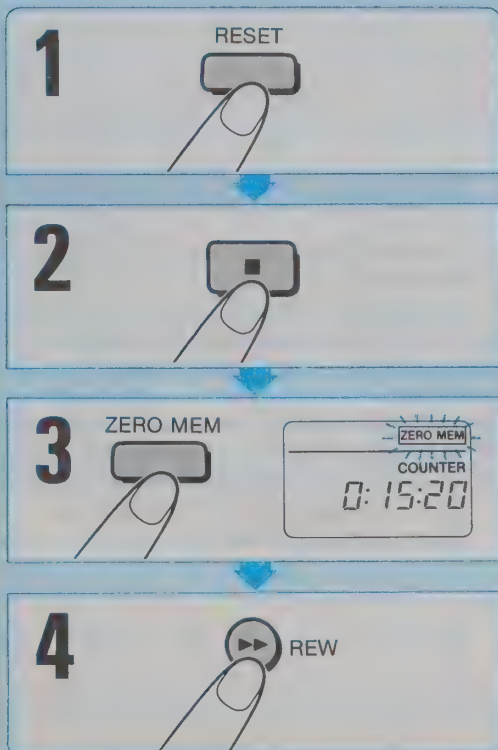
NOTES

- The ZERO MEM button does not function during recording or playback mode.
- Be sure to press the ZERO MEM button when the tape is stopped.
- The ZERO MEM mode is cancelled automatically once the tape is rewound or sent forward to zero.

N-1



N-2



TV PROGRAM RECORDING

The following connections make both TV program viewing/recording and tape playback possible.

COMBINATION OF THE EQUIPMENTS TO BE USED

Connection example 1 (page 33)

VCR without input selector

+

TV without audio/video input jacks

+

CCD-V9/V90

Connection example 2 (page 34)

VCR with an input selector

+

TV without audio/video input jacks

+

CCD-V9/V90

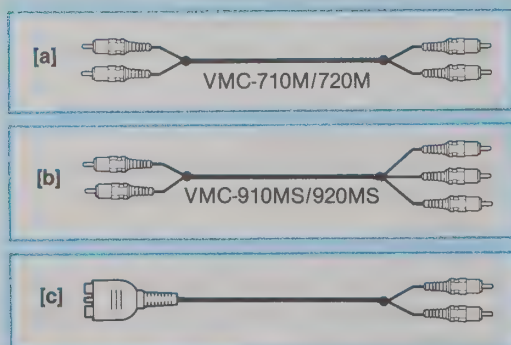
Connection example 3 (page 35)

TV tuner and Component TV or TV with audio/video input and output jacks

+

CCD-V9/V90

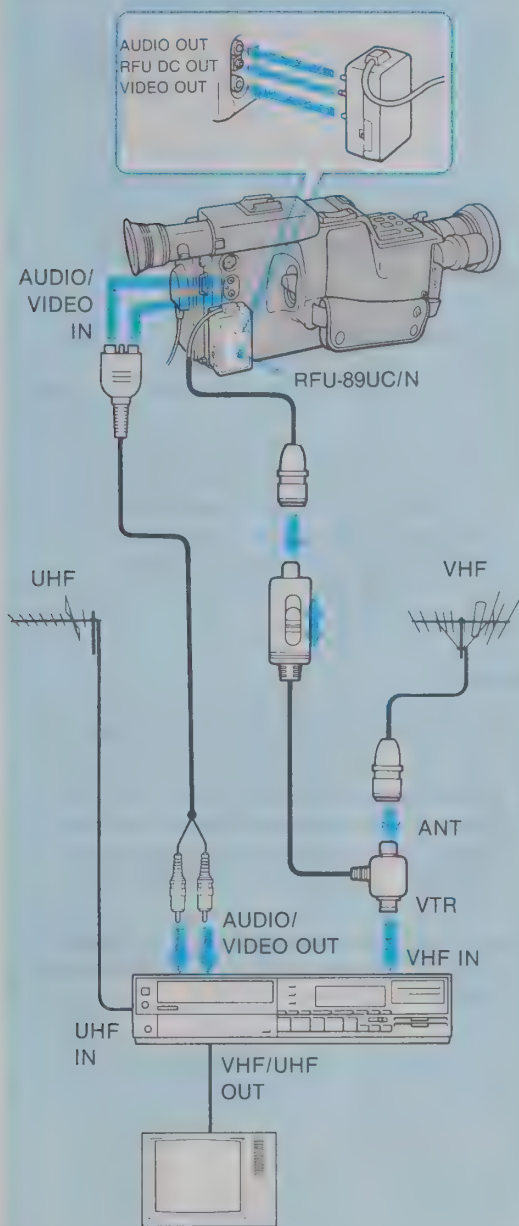
O-1



CONNECTING CABLES

- For antenna cable connections, use 75-ohm coaxial cables.
- For video/audio connection, use the supplied or optional audio/video cable to match the connectors on the equipment to be connected.

- [a]** VMC-710M/720M for monaural equipment
- [b]** VMC-910MS/920MS for stereo equipment
- [c]** Supplied audio/video cable for connection to the miniphono AUDIO IN/VIDEO IN jacks on the CCD-V9/V90



CONNECTION EXAMPLE 1

VCR without input selector

+

TV without audio/video input jacks

+

CCD-V9/V90

The RFU-89UC/N RFU adaptor is required.

Connections

- 1 Connect the equipments as shown in the illustration.
- 2 Select the channel selector of the RFU-89UC/N to either VHF channel 3 CH or 4 CH which is not active in your area.
- 3 Set the selector switch on the antenna selector as follows:

For viewing a playback picture or a picture being recorded on the CCD-V9/V90 → VTR
For viewing TV programs or playback picture of the VCR → ANT

TV program recording

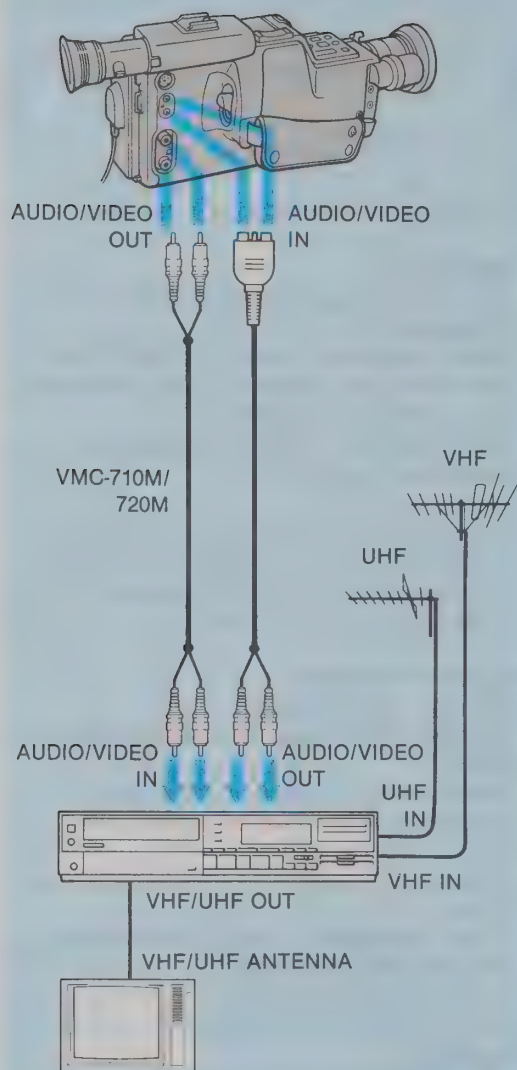
- 1 Turn on the VCR and TV.
- 2 Set the POWER switch on the CCD-V9/V90 to VTR.
- 3 Set the selector switch on the antenna selector to ANT and select the program position for the VCR on the TV.
- 4 Select the TV channel to be recorded on the VCR.
- 5 Insert a cassette into the CCD-V9/V90 and slide the REC ● switch. Recording will start.

Playback

- 1 Turn on the TV.
- 2 Set the POWER switch on the CCD-V9/V90 to VTR.
- 3 Set the selector switch on the antenna selector to VTR and select the channel for the VCR on the TV.
- 4 Insert a cassette into the CCD-V9/V90 and press the button. Playback will start.

TO VIEW ANOTHER TV PROGRAM WHILE RECORDING

Set the TV/VTR select button on the VCR to TV and the selector switch on the antenna selector to ANT. Select the desired program on the TV.



CONNECTION EXAMPLE 2 O-3

VCR with an input selector

+

TV without audio/video input jacks

+

CCD-V9/V90

Connections

Connect the equipments as shown in the illustration.

TV program recording

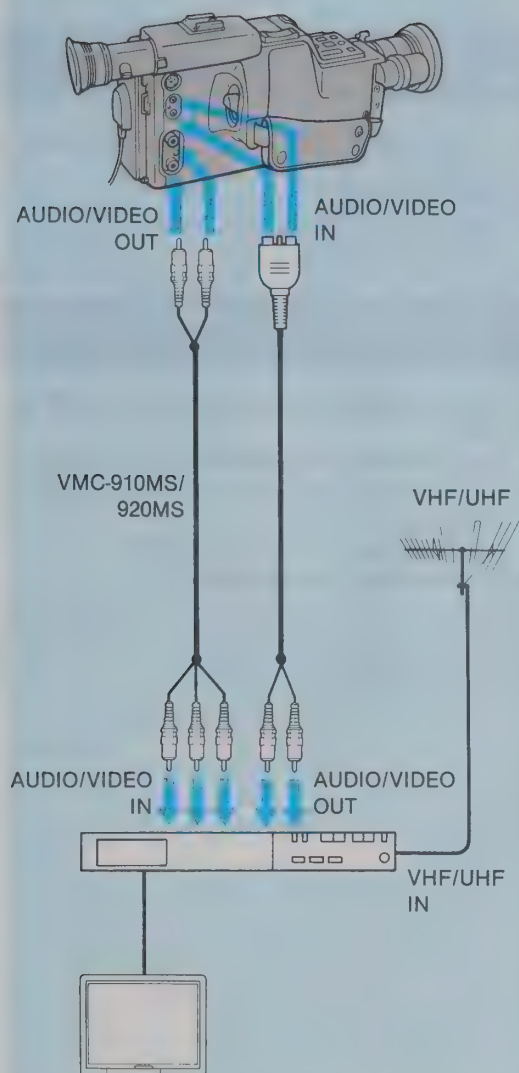
- 1 Turn on the VCR and TV.
- 2 Set the POWER switch on the CCD-V9/V90 to VTR.
- 3 Select the channel for the VCR on the TV.
- 4 Set the input selector to TUNER, the TV/VTR select button to VTR and select the TV channel to be recorded on the VCR.
- 5 Insert a cassette into the CCD-V9/V90 and slide the REC ● switch. Recording will start.

Playback

- 1 Turn on the VCR and TV.
- 2 Set the POWER switch on the CCD-V9/V90 to VTR.
- 3 Set the input selector on the VCR to LINE and select the channel for the VCR on the TV.
- 4 Insert a cassette into the CCD-V9/V90 and press the ◀ button. Playback will start.

TO VIEW ANOTHER TV PROGRAM WHILE RECORDING

Set the TV/VTR select button on the VCR to TV and select the desired program on the TV.



CONNECTION EXAMPLE 3 [D-4]

TV tuner and Component TV or TV with audio/video input and output jacks

+

CCD-V9/V90

Connections

Connect the equipments as shown in the illustration.

TV program recording

- 1 Turn on the TV tuner or TV.
- 2 Set the POWER switch on the CCD-V9/V90 to VTR.
- 3 Set the input selector on the TV tuner or TV to TV and select the TV channel to be recorded.
- 4 Insert a cassette into the CCD-V9/V90 and slide the REC ● switch. Recording will start.

Playback

- 1 Turn on the TV tuner or TV.
- 2 Set the POWER switch on the CCD-V9/V90 to VTR.
- 3 Set the input selector on the TV tuner or TV to VIDEO.
- 4 Insert a cassette into the CCD-V9/V90 and press the ◀ button. Playback will start.

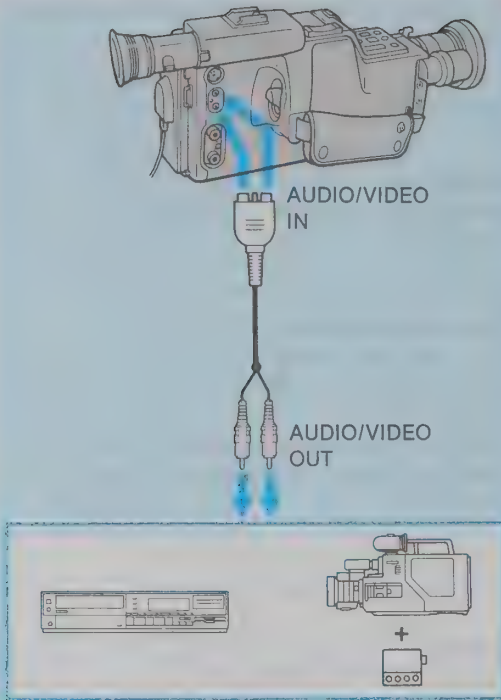
TO STOP THE TAPE MOMENTARILY

Press the ■ button. The TV program can be seen on the TV but the picture will not be recorded.

To resume recording, press the ■ button again.

When the recording pause mode lasts for approximately 7 minutes, the pause mode will be automatically released and the unit will be set in the stop mode.

P-1



To edit a home movie tape, you will need another VCR or another video camera recorder.

TO EDIT FROM ANOTHER VCR TO THE CCD-V9 [P1]

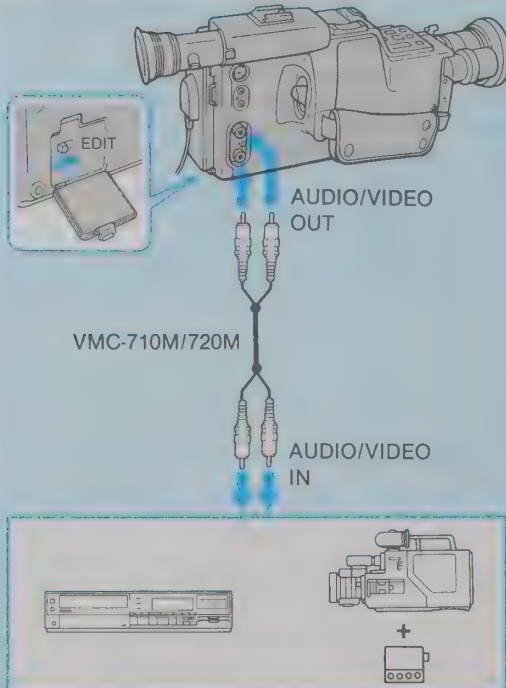
- 1 Set the POWER switch on the CCD-V9/V90 to VTR.
- 2 Start playback on another VCR.
- 3 Start recording on the CCD-V9/V90.

TO EDIT FROM THE CCD-V9 TO ANOTHER VCR [P2]

- 1 Set the POWER switch on the CCD-V9/V90 to VTR.
- 2 Slide the EDIT switch in the lithium battery compartment in the arrow direction ("EDIT" position).
- 3 Start playback on the CCD-V9/V90.
- 4 Start recording on the other VCR.

The optional RM-E100/E100V video editing controller allows easier editing between two VCRs.

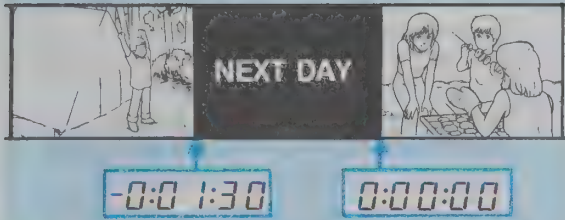
P-2



INSERT RECORDING

Q-1

You can insert (record) video and audio simultaneously from the camera, a TV or a VCR onto any recorded tape. **Q-1**



PREPARATION

Connect the necessary equipment and prepare a program source to be inserted. For details, refer to the corresponding page.

To insert camera recording [page 14]

To insert a TV program [page 32]

To insert a program from another VCR [page 36]

Note

For insert recording, use SP-recorded tapes. LP-recorded tapes cannot be used.

Monitor the picture being inserted on the viewfinder screen.

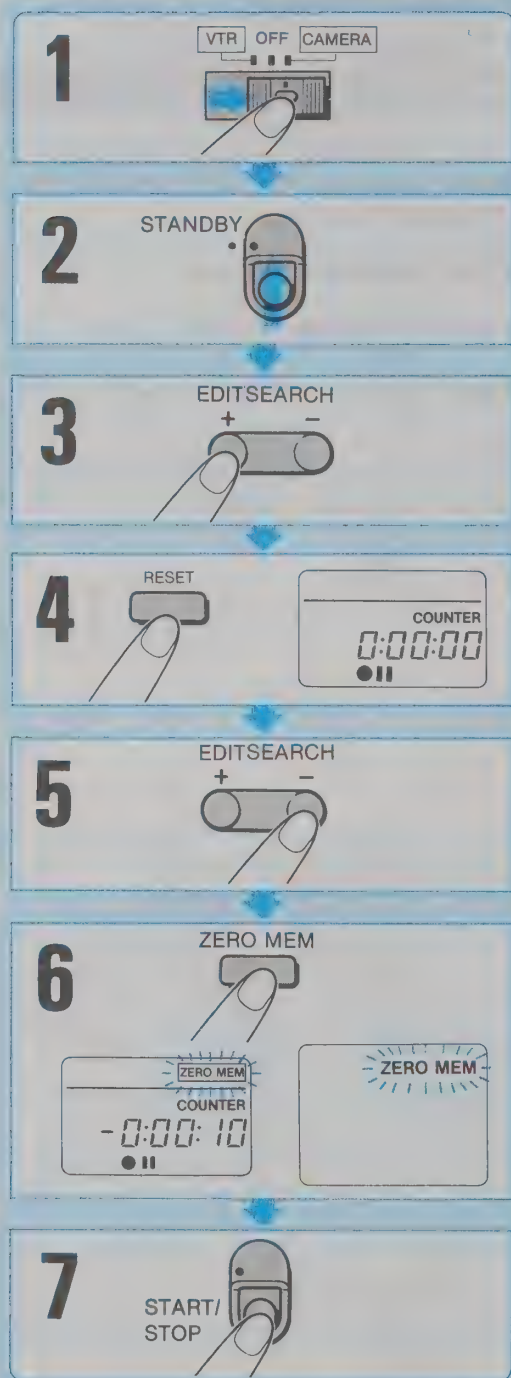
- 1 Set the POWER switch to CAMERA.
- 2 Slide the STANDBY switch up to set the unit to recording pause mode.
- 3 Keep pressing the "+" or "-" side of the EDITSEARCH button and release the button at the point where the insert should end. The unit will be set to recording pause mode.
- 4 Display the counter in the display window and press the RESET button. The counter is reset to zero.
- 5 Keep pressing the "-" side of the EDITSEARCH button and release the button at the point where the insert should begin.
- 6 Press the ZERO MEM button. The insert ending point is stored in memory.
- 7 Press the START/STOP button. Insert recording will begin.

The insert recording will stop automatically near the counter zero point.

To cancel ZERO MEM mode, press the ZERO MEM button so that the ZERO MEM indicator disappears.

To insert the date or time

Follow steps 1 through 6 above, press the SELECT button to display the date or time indication on the viewfinder screen and then press the START/STOP button.



TO INSERT A TV PROGRAM OR A PROGRAM FROM ANOTHER VCR

Monitor the picture being inserted on the viewfinder screen.

- 1 Set the POWER switch to VTR.
- 2 Locate the point on the tape where the insert should end by pressing the ◀◀ button during playback.
- 3 Display the counter in the display window and press the RESET button.
The counter is reset to zero.
- 4 Press the ▶▶ button during playback to rewind the tape a little further than the point where the insert should begin.
- 5 Release the ▶▶ button to resume playback and press the || button at the insert starting point.
- 6 Slide the REC ● switch in the arrow direction to set the unit to recording pause mode.
- 7 Press the ZERO MEM button.
The insert ending point is stored in memory.
- 8 To start recording, press the || button.

The insert recording will stop automatically near the counter zero point.

To cancel ZERO MEM mode, press the ZERO MEM button so that the ZERO MEM indicator disappears.

NOTES ON ZERO MEM MODE

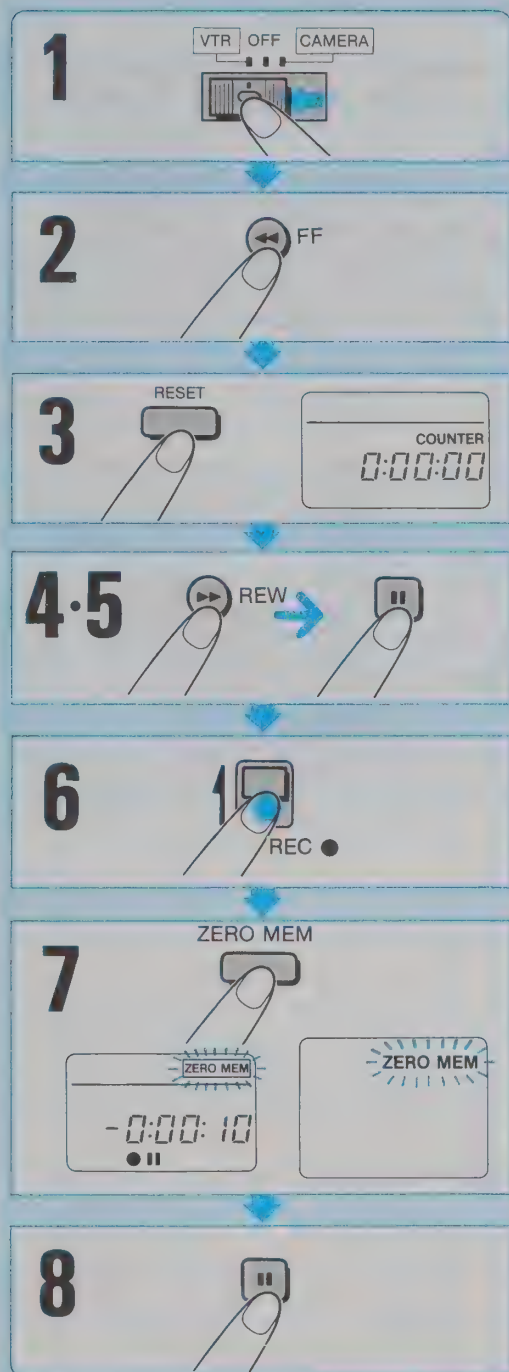
ZERO MEM mode is cancelled automatically in the following cases.

- When an insert recording is completed.
- When the ■ or ◀◀ button is pressed or the tape is sent forward or rewound in fast-forward or rewind mode.
- When the position of the POWER switch is changed.
- When the power is turned off.
- When the cassette is ejected.

To restore it, press the ZERO MEM button again.

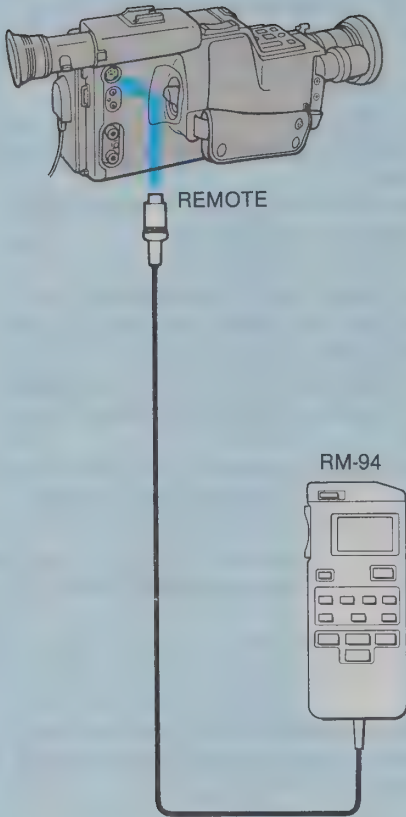
NOTES

- When recording pause mode lasts for approximately 7 minutes, pause mode will be automatically released and the unit will be set to stop mode.
- When the inserted tape is played back, the picture may be distorted at the end of the inserted program.



REMOTE CONTROL OPERATION R

R



With an optional RM-94 Remote Commander*, you can operate the CCD-V9/V90 video camera recorder from a distance.

For details on operation, see the instruction manual provided with the Remote Commander.

NOTES

- To view the last scene of the recording, press either the REC REVIEW or EDITSEARCH button on the RM-94.
- The fade-in and fade-out cannot be operated with the Remote Commander.

USING THE RM-84

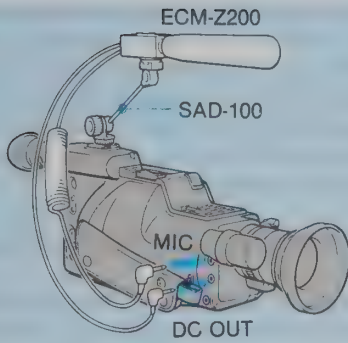
The optional RM-84 Remote Commander can also be used with this unit.

- To turn the CCD-V9/V90 on and off with the RM-84, first set the POWER switch on the CCD-V9/V90 to CAMERA or VTR as required, and press the VTR POWER button on the RM-84.
The CAMERA POWER button on the RM-84 does not function with the CCD-V9/V90.
- To start and stop camera recording with the RM-84, keep the STANDBY switch on the CCD-V9/V90 in the upper STANDBY position.
- When the POWER switch is set to CAMERA on the CCD-V9/V90, both the CAMERA POWER and VTR POWER lamps light on the RM-84. This is not a problem.

*Available in near future.

USE OF AN EXTERNAL MICROPHONE

S-1



The built-in microphone picks up sounds equally from all directions (omni-directional, monaural type).

By using an optional microphone ECM-Z200, ECM-K120, etc., you can enjoy more efficient audio recording.

ECM-Z200 **S-1**

This microphone can zoom the sound as the lever is slid.

For attachment, the optional SAD-100 external microphone shoe is required.

ECM-K120 **S-2**

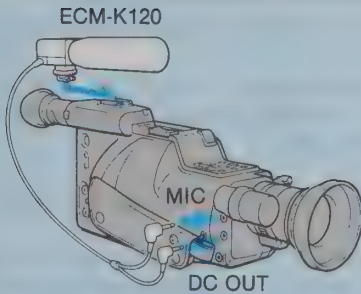
This microphone can pick up sound in three zones and switch from zone to zone as the selector is set.

Attach the microphone directly to the CCD-V9/ V90.

NOTE

The built-in microphone will not operate when an optional microphone is connected to the MIC jack.

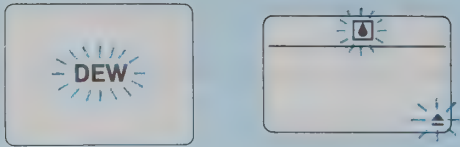
S-2



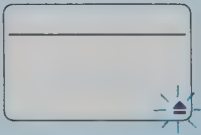
NOTES ON MOISTURE CONDENSATION

If the unit is brought directly from a cold to a warm location, moisture may condense inside the unit, on the surface of the tape or on the lens. In this condition, the tape may adhere to the head drum and damaged or the unit may not operate correctly. To prevent possible damage under these circumstances, the unit is furnished with moisture sensors.

T-1




T-2




If moisture is present inside the recorder section

T-1


When the power is turned on, the DEW indicator blinks in the viewfinder and the  indicator blinks in the display window. No function button except the EJECT switch will work.

Eject the cassette if present, and turn off the unit and let it sit with the cassette compartment open (at least for one hour).


The unit can be used again if none of the DEW and  indicators appears when the power is turned on again.

If moisture is present on the surface of the tape

T-2

When the tape is inserted and a tape transport button is pressed, the  indicator blinks in the display window. No function button except the EJECT switch will work.

Eject the cassette and let the unit and the cassette sit at least for one hour.

The cassette can be used again if the  indicator does not appear when the cassette is inserted and a tape transport button is pressed.

If moisture is present on the lens

There are no caution indicator, but the lens becomes dim. Turn off the power and leave the unit unused at least for one hour.

PRECAUTIONS

OPERATION

- Operate the unit on 6–7.5V DC.
- For DC or AC operation, use the accessories recommended in this manual.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Do not hold the unit by the viewfinder.
- Avoid rough handling or mechanical shock to the unit. Be particularly careful of the lens.
- Do not apply excessive force to the microphone.
- Do not let the sun shine directly into the eyecup of the viewfinder, because the plastic inside the viewfinder may be damaged.
- Avoid shooting the same object or a very bright object such as the sun or a light source for a long period of time (for example, as a lookout camera), as this will damage the color filter inside the camera.
- Remove and store video cassettes after recording or playback.
- Do not wrap up the unit and operate it because heat may build up internally.
- Avoid using and storing the recorder in the following locations.
 - Locations susceptible to vibration.
 - Locations exposed to strong magnetic fields.
 - Locations near TV or radio transmitters where strong radio waves are generated.
- Do not put the unit on the sand.

CARE

- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.
- When the unit will not be used for a long period of time, periodically turn on the power, operate the camera section and recorder section and play back a tape for about three minutes.
- Clean the lens with a soft brush to remove dust. If there are fingerprints on the lens, remove them with a soft cloth. Clean the recorder body with a dry, soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.
For protection, keep the lens cap on the lens when not using the camera.

USING YOUR RECORDER ABROAD

Each country has special TV color broadcast and electricity systems. Before using your recorder abroad, check the following points.

Differences in color systems

If you prepare fully charged battery packs and the AC-V33 AC power adaptor which can be used in all areas with the local power supply of 100 V–240 V, you can use your recorder in any country. You can monitor the playback picture on the viewfinder screen. However, to monitor the playback picture on a TV, the TV must be based on the NTSC system and equipped with video/audio inputs.

NTSC system countries

Bahama Islands, Canada, Central America, Japan, Korea, Mexico, Taiwan, the Philippines, U.S.A., etc.

PAL system countries

Australia, Austria, Belgium, China, Denmark, Finland, Great Britain, Holland, Hong Kong, Italy, Kuwait, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Thailand, West Germany, etc.

SECAM system countries

Bulgaria, France, Hungary, Iran, Iraq, Monaco, Poland, the Soviet Union, etc.

SPECIFICATIONS

System

Video recording system

Rotary two heads,
Helical scanning FM system

Audio recording system

Rotary head, FM system

Video signal NTSC color, EIA standards

Usable cassette 8 mm video format cassette

Tape speed SP: Approx. 1.43 cm/sec.

LP: Approx. 0.72 cm/sec.
(playback only)

Recording or playback time

SP: 2 hours (P6-120)

LP: 4 hours (P6-120)

(playback only)

Fast forward time Approx. 6 min. 30 sec. (P6-120)

Image device CCD (Charge Coupled Device)

Viewfinder Electric viewfinder

(0.7" black and white)

Lens Combined 6 × power zoom

lens

f = 12-72 mm, F1.6 with macro

Filter diameter: 46 mm

Auto focus system TCL

Color temperature Preset values

OUTDOOR: 5,800 K

INDOOR: 3,200 K

Auto: From the light at a
tungsten lamp to the light
on a slightly overcast day.

Minimum illumination 5 lux

Illumination range 5 lux-100,000 lux

(0.46-9,294 footcandles)

Recommended illumination

More than 100 lux

(9.3 footcandles)

Aperture correction Automatic, manual (variable)

Input and output connector

Output jacks

Video output: phono

1 Vp-p, 75 ohms

unbalanced, sync negative

Audio output: phono

-10 dBs, at output

impedance less than 2.2

kilohms

Input jacks

Video input: miniphono

1 Vp-p, 75 ohms

unbalanced, sync negative

Audio input: miniphono

-10 dBs, input impedance

more than 47 kilohms

Earphone jack Minijack, 8-ohm impedance

Remote connector 5-pin connector

MIC jack Minijack, -66 dBs, low

impedance

With 2.5-3 V DC output,

impedance 6.8 kilohms

Microphone power output jack

Special minijack, 5 V DC

Display in the viewfinder

Mode indication

REC/STBY/OUTDOOR/
INDOOR/FADER/shutter speed

Caution indication

BATTERY/DEW/TAPE END/
CAUTION/CASSETTE

Date or time indication

Small 8 characters

Date: From Jan. 1, 1987 to

Dec. 31, 2015

Time: 12 hour cycle

Clock

Crystal lock

Memory back-up

Approx. 2 years using the

CR2025 lithium battery

General

Power requirements 6 V DC

Power consumption 6.2W (camera recording)

including the viewfinder

Installation

Horizontally, vertically

Operating temperature

0°C to 40°C (32°F to 104°F)

Storage temperature

-20°C to +60°C (-4°F to

+140°F)

Dimensions

Approx. 99 × 136 × 330 mm (w/h/d)

(4 × 5³/₈ × 13 in.)

Weight

Approx. 1.1 kg (2 lb 7 oz)

excluding the battery and

cassette

Approx. 1.3 kg (2 lb 14 oz)

including the NP-55 battery

and cassette

Microphone

Electret condenser

microphone, omni-directional

monaural type

Accessories supplied

Lithium battery (1)

Connecting cable (miniphono to 2 phono) (1)

Lens cap (1)

Optional accessories

Battery pack NP-55, NP-77

AC power adaptor AC-V55

Car battery cord DCC-16AW

Battery adaptor NPA-55

RFU adaptor RFU-89UC/N

Connecting cable VMC-910MS/920MS (2 phono to 3

phono), VMC-710M/720M (2 phono to 2 phono)

Microphone ECM-Z200, ECM-K120

External microphone shoe SAD-100

Remote Commander RM-94, RM-84

Design and specifications are subject to change
without notice.

TROUBLESHOOTING

If you think you have a problem, double-check before calling the serviceman.
You may have overlooked something relatively simple!

Symptom	Cause	Procedure
The power will not turn on.	The POWER switch on the AC power adaptor is set to OFF.	Depress the POWER switch.
The START/STOP button does not operate.	The tape is affixed to the drum.	Remove the cassette with the EJECT switch.
	The tape is at its end.	Rewind the tape or use a new one.
	The POWER switch is set to VTR or OFF.	Set it to CAMERA.
	The tab on the cassette is out (red).	Use a new cassette or slide the tab.
The tape does not move by pressing a tape transport button.	The POWER switch is set to CAMERA or OFF.	Set it to VTR.
	The tape is at its end.	Rewind the tape or use a new one.
Recording cannot be done even when the REC ● switch is slid.	The tab on the cassette is out (red).	Use a new cassette or slide the tab in.
Recording stops suddenly.	The ZERO MEM mode is set.	Press the ZERO MEM button.
The power turns off.	While being operated in the CAMERA mode, the recorder has been in the pause mode for more than 7 minutes.	Set the POWER switch to OFF and then to CAMERA.
	The battery is exhausted.	Use a charged battery.
A vertical band appears when a subject such as lights or a candle flame is shot against a dark background.	The contrast between the subject and background is too high; the camera is not malfunctioning.	—
The battery pack is quickly discharged.	The ambient temperature is too low.	—
	The battery pack has not been charged fully.	Charge the battery pack again.
The auto focusing function does not work.	The AUTO LOCK switch is set to the white mark position.	Set it to the green mark position.
	Shooting conditions are not suitable for auto focusing operation.	Focus manually. (See page 19.)
The auto white balance function does not work.	The white balance sensor is covered.	Remove the obstacle.
	Shooting conditions are not suitable for the auto white balance operation.	Adjust the white balance manually. (See page 21.)
The cassette cannot be removed from the compartment.	The battery is exhausted.	Use the charged battery or the AC power adaptor.

Symptom	Cause	Procedure
The image on the viewfinder screen is not clear.	The viewfinder lens is not adjusted.	Adjust the viewfinder lens. (See page 11.)
The playback picture is not clear.	The EDIT switch is set to the "EDIT" position.	Set the EDIT switch to the opposite position to the arrow direction.
	The channel for the VCR is not adjusted correctly on the TV.	Adjust the TV. (See page 27.)
	The video heads may be contaminated.	Clean the heads using a cleaning cassette.

HINTS FOR BETTER SHOOTING

**The key to success—
practice makes perfect!**

Record over and over using the same tape...
see what you've recorded on TV as soon as you're finished...
these are just two of the advantages of video recording.
The more you use your recorder, the more professional you'll become.
In this section, we'd like to introduce some basic techniques
to help bring more enjoyment to your video recording.

Video8

Handycam PRO

A



Getting stable pictures — starts with a correct stance

For hand-held shots, shooting position is the key.

Using three basic positions as a reference, practice shooting positions until you find the stance which provides the easiest shooting and best results. **A**

Basic shooting positions

- When kneeling, placing one knee on the ground provides the best stability.
- Place the eye firmly against the viewfinder eyecup.
- For hand-held shots, support the video camera recorder with your left hand and assume a comfortable, stable position. Make sure the unit does not move.
- Relax your shoulders.
- Put your right elbow firmly against your side to help stabilize the video camera recorder.
- If you are going to move the unit while recording, keep both eyes open as much as possible.
- Stand firmly with your feet comfortably apart. Leaning against something firm such as a wall or tree will also provide extra stability.

Use a tripod or monopod if possible

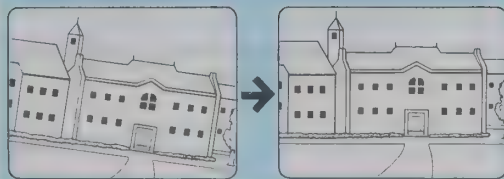
If you have a tripod for your still camera, it can also be used with the video camera recorder. Use a sturdy one.

If a tripod is not available, try placing the camera on a tabletop, wall, or any other flat surface of suitable height.

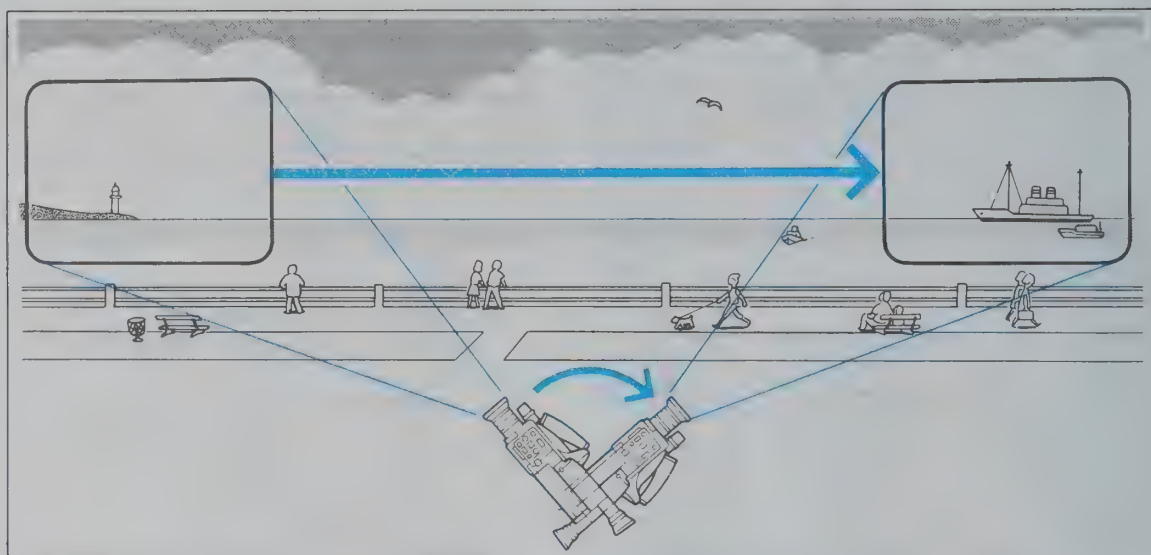
Keeping the horizontal plane level

Even if camera work is smooth and stable, shots can be tilted or off axis horizontally.

The horizontal plane can be easily determined by using the viewfinder frame as a reference. **B**



C



Three frequently used shots

These three types of shots will bring additional action and movement to your scenes when properly used.

For greatest effect, it is advisable that they not be overused.

Panning—moving the camera horizontally

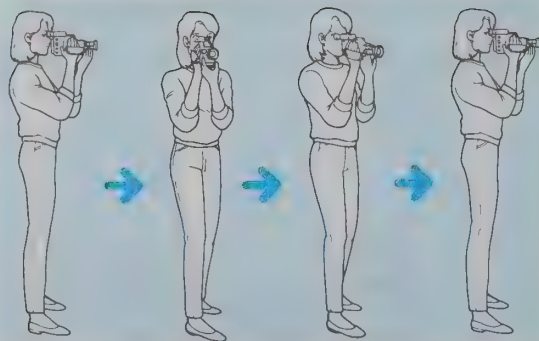
For emphasizing the grandeur of a scene, and for including all of the scenery in a single continuous shot.

- Hold the recorder on the scene for a few seconds at the beginning and end of the pan.
- Pan slowly across the scene. (Stop at about 90°.)

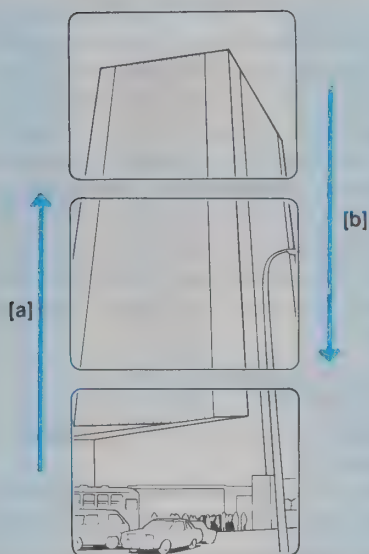
For professional-looking pans

- 1 First, stand so that you face in the direction where the pan will end.
- 2 Without moving your feet, rotate your upper body so that your recorder faces the direction where the scene will begin.
- 3 Start shooting. Rotate your body slowly to the point where the pan will stop.

D



E



The **best panning speed** is one that will allow you to explain the scene during playback.

Repeated pans of the same scene should be avoided.

If you can hold your breath during panning and zooming, camera shake can be minimized, and you can concentrate more easily on the scene.

Tilting—moving the camera vertically **E**

To emphasize height...tilt up. [a]

To emphasize the final part of the scene...tilt down. [b]

Tilting shots with the video camera recorder should be slightly faster than pans.

Zooming—changing the size of the subject

To draw attention to something specific
...zoom in. **F**

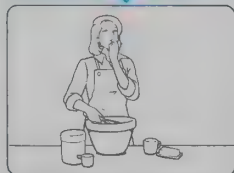
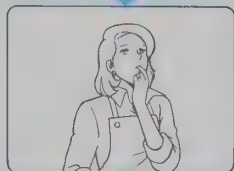
Because telephoto shots make camera shake more noticeable, the recorder should be as stable as possible.

To end the shot by making the circumstances surrounding the scene understood...zoom out. **G**

F



G



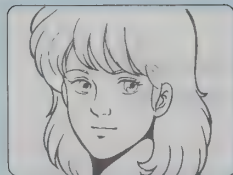
H**Sizing the scene**

—mixing long, medium and close-up shots

Continuous use of long shots or close-ups will give your productions a monotonous “flat” impression. To avoid this, it is important to consider exactly what it is that you wish to “say” with every shot. Indeed, it is possible to change the impression that any subject makes merely by changing the way it’s shot. **[H]** You don’t have to change the subject to alter the scene—you can achieve a different effect by changing the size of the subject itself within the scene.

I

[a-1]



[a-2]

**Framing people**

Basic shots for properly framing people are shown left. **[I]**

Experience has shown that shots that frame people differently than this do not have as pleasant an effect.

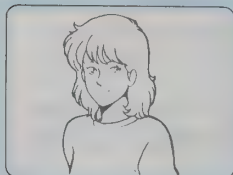
[a-1] Face shot

Even if you cut off the hairline, don’t cut off the chin.

[a-2] Face shot

When shooting a profile, leave the space in front of the face to create a “sight line.”

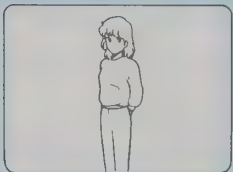
[b]



[c]

**[b] Bust shot—Chest and above****[c] Waist shot—Upper hips and above****[d] Knee shot—Knees and above****[e] Full shot—Entire body**

[d]



[e]



Scene length **—not too long, not too short**

While there's no hard-and-fast rule, it is generally advisable to make each scene 6–7 seconds in length for easier viewing.

A succession of short scenes can tire the viewer, while long, single scenes can become boring.

Cutting according to the narration

Cut the scene when the narration is finished.

Cutting according to the subject

- Make long shots longer...and close-ups shorter.
Because long shots have more to see in them than close-ups, show them longer so the viewer may understand what's there.
- Make interesting shots and shots in which the subject is constantly moving longer.
- Make static shots shorter

Shoot as if you were watching the playback. That is, it's helpful to occasionally imagine your commentary of the scene even as you're shooting it!

LIGHTING FOR INDOOR SHOOTING

Lighting—For the sharpest pictures, you need the best light

For the most brilliant color in your scenes, a sufficient light level must be maintained. If shooting is done indoors or under other circumstances where light is insufficient, lights must be used for best results.

What kind of light is best? Choosing the right lights

Photography lamps or halogen lamps are recommended. For best results, use of the Sony HVL-50DA and HVL-150 video lights are recommended as their weight and low heat output levels allow safe, direct connection to the camera.

For lighting of a wide area for easy use—
reflector flood light

To emphasize the subject—use a reflector
spotlight.

Lighting the subject

The number of lights and their angle to the subject can make a significant difference in lighting effectiveness.

With a single light:

Locate it above and to one side of the subject. With just one light, contrast is unavoidably enhanced.

To eliminate shadows, another light should be added.

With two lights:

Locate one light above and to one side of the subject, and the second to the side of the subject in such a position that the shadows are eliminated.







If contrast is too strong when lights are used, point a light at the ceiling or reflect it off a sheet of white paper to add soft fill-in light.

Precautions for using lights

- Do not point the light at the recorder body. Instead, make sure that it is pointed parallel to the camera or away from it. Be especially careful with lights attached to the accessory shoe. The high heat from the lights pointed at the camera body can warp the cabinet.
- Lights weighing over 500 g (1 lb.), or floodlights (lights with wide dispersion) must not be attached to the accessory shoe, as the heat from the light will warp the cabinet. Use of a special light stand is recommended.
- Lights become extremely hot during use—do not touch them!
- Do not mix different types of light, as light color temperatures vary and can cause the subject's color to be recorded incorrectly.

For detailed instructions on proper use of lights, carefully read the instruction manuals that accompany them.

Football Tournament page 1

5 sec Title		Narration: Mom: 'X month, Y day at Z field
10 sec Zoom out Frame out		Me: 'I'm all ready to go
6 sec Cut in		Mom's voice Introducing the stadium, atmosphere, etc.
30 sec Cut out Panning		
2 min 10 sec		Show the player's ex pressions
2 min 15 sec Zoom in		Show the ex citement in the stands

[a]

[b]

[c]

To make a first-class production, it is important to decide the contents and shooting sequence in advance. The first step is to sketch out a simple outline of the actual production based on the time-tested “five W’s of journalism” (who, what, where, when, why, how). This will allow you to efficiently and effectively record the many exciting events that happen around you, such as sports matches, graduations, birthday parties, picnics, camping trips, and other special events.

After the theme has been decided, think about the progression of the scenes and write down the major points of the “story flow” on paper. This is called a scenario. When writing the script, it is helpful to scout the location where shooting will take place, and, in the event of school activities or weddings, to obtain a copy of the program in advance, if possible. This will allow you to complete actual recording with a minimum of bother.

The following items show the points to be mentioned and some notes for making a scenario.

- [a]
 - Recording time
 - Camerawork
 - SE (Sound Effect)—Background music and sound effects
- [b] Simple outline sketches in a TV frame
- [c] Scene progression and narration

UNDERSTANDING LIGHT AND COLOR

Brightness levels

The single greatest influence on picture quality is the brightness level. Using the following chart as a reference, take a few minutes to familiarize yourself with brightness levels to improve your recording.

ND filter required	Unit: lux	Snow-covered mountains Snow fields Sandy beach, clear day in summer
	100,000	Clear day, mid-day(100,000) Clear day, mid-afternoon (35,000) Overcast day, mid-day (32,000)
Normal recording	10,000	
	1,000	Overcast day, one hour after sunrise (2,000) Office lit by fluorescent lamps, near window (1,000) Clear day, one hour before sunset (1,000)
	500	Department store counter (500–700) Station wicket (650) Office lit by fluorescent lamps (400–500) Room lit by two 30 W fluorescent lamps (300)
	300	Subway station platform (300)
Video light recommended	100	Arcade at night (150–200)
Video light required		Theater lobby (15–35) Candle light (10–15)
	10	

When to use an ND filter








Exceptionally bright scenes such as sunny days at the beach in summer or on snow fields in winter will look “washed out” when recorded. To make these scenes recorded naturally, an ND filter is required. (Refer to the chart)

Three types are available—ND2, ND4, ND8—which reduce the exposure level to 1/2, 1/4, and 1/8, respectively.

Select filters to match the lens diameter of 46 mm.

Color temperature—how it effects white balance adjustment

If the temperature of an object continues to increase, it will eventually begin giving off light. At this time, there is a fixed relationship between the object's temperature and its "light color." The temperature of the object radiating the light is expressed in absolute temperature (K). This is also known as the color temperature, which in turn stands for "light color." As color temperature increases, the light color changes from red to yellow to white to blue.

Natural light color temperature (K)	Color change	Artificial light color temperature (K)
Clear sky Slightly overcast 	10,000(K) ↑ 10,000(K)	
	8,000 8,000	
Cloudy, rainy 	7,000 Blue 7,000	
	6,000 6,000	Fluorescent lamp (clear) 
	5,000 5,000	
Direct sunlight  2 hr.	4,000 White 4,000	Fluorescent lamp (white)
	3,500 3,500	Fluorescent lamp (off white)
	3,200 3,200	Studio lamp
40 min.	3,000 3,000	Halogen lamp
	Yellow	
	2,500 2,500	Tungsten lamp 
30 min.	↓	
20 min.	Red 2,000	
	2,000 Red 2,000	Candle light  
Time after sunrise/ before sunset		
↑ Sunrise/sunset		

To make sure you don't miss those "once in a lifetime" scenes, go over the following check list and make the necessary preparations.

Required for recording

CCD-V9/V90

Battery pack NP-55 or NP-77

Is it charged?

Are there enough battery packs to cover the planned recording time?

Cassette tapes

Have you prepared enough tapes to cover the planned recording time?

Convenient accessories

Carrying case LCH-V50

Shoulder strap BLT-30, BLT-50 or BLT-80

Tripod

Required for scenes in which stability of the camera is important.

Tripod mount screw must match the receptacle mount.

AC power adaptor AC-V33

Used to operate the video camera recorder on house current and to charge battery packs

RFU adaptor RFU-89UC/N

Adaptor for connection to a TV which is not equipped with video/audio inputs.

External microphone ECM-Z200

Zoom microphone to allow variable recording field according to camera zooming

External microphone shoe SAD-100

Attaches a microphone directly to the unit for trouble-free recording.

Video light HVL-50DA or HVL-150

Required for recording in low light situations.

Earphone (miniplug)

Permits monitoring of audio signal during recording.

Viewfinder adaptor VFA-50

Convenient for low-angle shooting

Close-up lens kit VF-150K

Convenient for zooming during macro shooting



SONY.

WAVE HANDBOOK

-12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 UTC +1 +2 +3 +4 +5 +6 +7 +8 +9 +10 +11 +12



Fairbanks

Vancouver

Chicago

San Francisco

New York

Honolulu

Mexico

Havana

+ 3.5

Lima

Brasilia

Rio de Janeiro

Santiago

Buenos Aires

Stockholm

Moscow

London

Berlin

Paris

Rome

Cairo

+ 3.5

+ 4.5

Bombay

+ 5.5

Bangkok

New Delhi

Hongkong

Peking

Tokyo

Jakarta

+ 9.5

Perth

Sydney

Wellington

The skies of the world are filled with electromagnetic waves

Unlike the past where only domestic programs were heard on the radio, many radio listeners have the opportunity to enjoy programs from overseas. But this is not all there is to radio listening. There are still many many programs such as

various news and business use programs, amateur radio that have not been aired. Now it is your turn to pursue the endless fascinations of electromagnetic waves through the many transmissions from domestic and overseas broadcasts.

■ AM STATIONS (UNITED STATES)

Station names and frequencies may change without notice.

Frequency is in kHz.

ALABAMA			WEBJ	1240	1000	Eufaula			WEUP	1600	5000	WHIY	1190	1000	WSHF	1290	1000
Abbeville			Bridgeport			WULA	1240	1000	WFIX	1450	1000	WHIY	1530	1000	Sumiton		
WARI	1480	1000	WBTS	1480	1000	Evergreen			WVOV	1000	10000	Muscle Shoals			WRSM	1540	1000
Albertville			Butler			WBLO	1470	1000	Irondale			WLAY	1450	1000	Sylacauga		
WAVU	630	1000	WPRN	1240	1000	Fairhope			WLPH	1480	5000	Oneonta			WFEW	1340	1000
Alexander City			Calera			WABF	1220	1000	Jackson			WCRL	1570	2500	WMLS	1290	1000
WACD	1590	1000	WBYE	1370	1000	Fayette			WHOD	1230	1000	Opelika			Talladega		
WRFS	1050	1000	Camden			WWWF	990	1000	Jacksonville			WAOA	1520	5000	WEYU	1580	2500
Andalusia			WCOX	1540	1000	Flomaton			WJXL	810	50000	WJHO	1400	1000	WNUZ	1230	1000
WAOO	1530	1000	Carrollton			WTCB	990	500	Jasper			Opp			Tallassee		
WKYD	920	5000	WRAG	590	1000	Floralia			WARF	1240	1000	WAMI	860	1000	WTLS	1300	1000
Anniston			Carville			WKWL	1230	1000	WWWB	1360	1000	WOPP	1290	2500	Thomasville		
WANA	1490	1000	WACQ	1130	1000	Florence			Lafayette			Ozark			WJDB	630	1000
WDNG	1450	1000	Centre			WBCF	1240	1000	WTXN	910	1000	WAYD	1190	1000	Troy		
WHMA	1390	5000	WAGC	1560	1000	WXOR	1340	1000	Lanett			WOZK	900	1000	WTBF	970	5000
Arab			WEIS	990	250	Foley			WRLD	1490	1000	Pell City			Tuscaloosa		
WRAB	1380	1000	Centreville			WHEP	1310	1000	Lineville			WFHK	1430	1000	WACT	1420	5000
Athens			WBIB	1110	1000	Fort Payne			WANL	1540	1000	Phenix City			WJRD	1150	5000
WJMW	730	1000	Clanton			WFPA	1400	1000	Luverne			WPNX	1460	5000	WNPT	1280	5000
WKAC	1080	5000	WKLF	980	1000	WZOB	1250	1000	WLVN	1080	500	Piedmont			WTBC	1230	1000
Atmore			Cullman			Gadsden			Marion			WPID	1280	1000	WTSK	790	2500
WATM	1590	5000	WFMH	1460	5000	WAAX	570	5000	WJAM	1310	5000	Prattville			Tuscumbia		
Auburn			WKUL	1340	1000	WGAD	1350	5000	Mobile			WPXC	1410	5000	WVNA	1590	5000
WAUD	1230	1000	Dadeville			WJBY	930	5000	WABB	1480	5000	WKSJ	1270	5000	WZZA	1410	500
Bay Minette			WDLK	1450	250	Geneva			WGOK	900	1000	Rainsville			Tuskegee		
WBCA	1110	10000	Decatur			WGEA	1150	1000	WKRQ	710	1000	WVSM	1500	1000	WBIL	580	500
Bessemer			WAJF	1490	1000	Greenville			WMOB	840	1000	Red Bay			Vernon		
WSMQ	1450	1000	WHOS	800	1000	WGYV	1380	1000	WMOO	1550	50000	WRMG	1430	1000	WVSA	1380	1000
Birmingham			WMSL	1400	1000	Guntersville			WPCY	1360	5000	Roankoe			Wetumpka		
WAPI	1070	50000	Demopolis			WGSV	1270	1000	WUNI	1410	5000	WELR	1360	1000	WETU	1250	5000
WATV	900	1000	WXAL	1400	1000	Haleyville			Monroeville			Russellville			Winfield		
WBUL	1220	1000	Dora			WJBB	1230	1000	WMFC	1360	1000	WKAX	1500	1000	WEZQ	1300	5000
WCRT	1260	5000	WPYK	1010	500	Hamilton			Montgomery			WWWR	920	1000	York		
WENN	1320	5000	Dothan			WERH	970	5000		1000	5000	Scottsboro			WYLS	1350	500
WERC	960	5000	WAGF	1320	1000	Hartselle			WBAM	740	50000	WCRI	1050	250			
WSGN	610	5000	WOOF	560	5000	WHRT	860	250	WCOV	1170	10000	WKEA	1330	5000	ALASKA		
WVOK	690	50000	WWNT	1450	1000	Homewood			WHYH	1440	5000	Selma			Anchorage		
WYDE	850	50000	Elba			WJLD	1400	1000	WLSQ	950	1000	WHBB	1490	1000	KANC	1080	10000
Boaz			WELB	1350	1000	Huntsville			WMGY	800	1000	WMRK	1340	1000	KBYR	700	1000
WBSA	1300	1000	Enterprise			WAAY	1550	50000	WXVI	1600	5000	WTQX	1570	5000	KENI	550	5000
Brewton			WIRB	600	1000	WBHP	1230	1000	Moulton			Sheffield			KFQD	750	50000

KHAR	590	5000	KSRM	920	5000	KASA	1540	10000	KTUC	1400	1000	Clinton			KAWW	1370	1000
KYAK	650	50000				KFLR	1230	1000	KUAT	1550	50000	KGFL	1110	1000	Helena		
Barrow			ARIZONA			KHEP	1280	1000	Wickenburg			Conway			KFFA	1360	1000
KBRW	680	10000	Bisbee			KIFN	860	1000	KSWW	1250	500	KCON	1230	1000	Hope		
Bethel			KSUN	1230	1000	KJJJ	910	5000	Willcox			KVEE	1330	500	KXAR	1490	1000
KYUK	580	5000	Bullhead City			KMEO	740	1000	KHIL	1250	5000	Corning			Horseshoe Bend		
Cordova			KRHS	1000	1000	KOY	550	5000	Williams			KCCB	1260	1000	KHAM	1000	250
KLAM	1450	250	Casa Grande			KPHX	1480	1000	KBWA	1240	1000	Crossett			Hot Springs		
Dillingham			KPIN	1260	1000	KTAR	620	5000	Window Rock			KAGH	800	250	KBHS	590	5000
KDLG	670	5000	Clifton			KXIV	1400	1000	KHAC	1110	10000	Dardanelle			KXOW	1420	5000
Fairbanks			KCUZ	1490	1000	Prescott			Winslow			KCAB	980	1000	KZNG	1340	1000
KFAR	660	10000	Coolidge			KENT	1340	1000	KINO	1230	1000	De Queen			Jacksonville		
KFRB	900	10000	KCKY	1150	1000	KNOT	1450	1000	Yuma			KDQN	1390	500	KIEL	1500	1000
KFRB	820	10000	Cottonwood			KYCA	1490	1000	KAWC	1320	500	De Witt			Jonesboro		
KIAK	970	5000	KVRD	1600	1000	Safford			KBLU	560	1000	KDEW	1470	500	KBMT	1230	1000
Glennallen			Douglas			KATO	1230	1000	KVOY	1400	1000	Dermott			KNEA	970	1000
KCAM	790	5000	KAPR	930	2500	Scottsdale						KAKA	1110	10000	Little Rock		
Homel			KDAP	1450	1000	KXAM	1440	5000	ARKANSAS			Dumas			KAAY	1090	50000
KBBI	1250	5000	Flagstaff			Sedona			Arkadelphia			KDDA	1560	500	KARN	920	5000
Juneau			KAFF	930	5000	KAZM	1470	5000	KVRC	1240	1000	El Dorado			KITA	1440	5000
KINY	800	5000	KCLS	600	5000	Show Low			Augusta			KDMS	1290	5000	KLRA	1010	10000
KJNO	630	1000	KEOS	690	1000	KVSL	1450	1000	KMCW	1190	500	KELD	1400	1000	KOKY	1250	1000
Ketchikan			Glendale			KVWM	970	5000	Bald Knob			England			KSOH	1050	1000
KETH	1290	5000	KRUX	1360	5000	Sierra Vista			KAPZ	710	250	KELC	1530	250	Magnolia		
KTKN	930	5000	Globe			KTAN	1420	1000	Batesville			Fayetteville			KVMA	630	1000
Kodiak			KGJM	1240	250	South Tucson			KAAB	1130	250	KFAY	1250	1000	Malvern		
KVOK	560	1000	Holbrook			KHYT	1330	5000	KBTA	1340	1000	KHOG	1440	1000	KBOK	1310	1000
WCVQ	960	250	KDJI	1270	5000	KXEW	1600	1000	Benton			Fordyce			Marianna		
Kotzebue			Kingman			Tempe			KBBA	690	250	KBJT	1570	250	KZOT	1460	500
KQTZ	720	5000	KAAA	1230	1000	KKKQ	1060	5000	KGKO	850	1000	Forrest City			Marked Tree		
Long Island			Lake Havasu City			KNIX	1580	50000	Bentonville			KXJK	950	5000	KPCA	1580	250
KABN	1150	5000	KFWJ	980	1000	Tolleson			KJEM	1190	500	Ft. Smith			Marshall		
Mc Grath			Mesa			KRDS	1190	5000	Berryville			KFPW	1230	1000	KCGS	1600	5000
KSKO	870	5000	KDJQ	1510	10000	KXEG	1010	1000	KTHS	1480	5000	KFSA	950	1000	Mc Gehee		
Nome			KZZP	1310	5000	Tuba City			Blytheville			KTCS	1410	1000	KVSA	1220	1000
KICY	850	10000	KIKO	1340	1000	KTBA	1050	5000	KLCN	910	5000	KWHN	1320	5000	Mena		
KNOM	780	10000	Nogales			Tucson			Brinkley			Glenwood			KENA	1450	1000
North Pole			KFBR	1340	250	KAIR	1490	1000	KBRI	1570	250	KWXL	1470	2500	Monette		
KJNP	1170	50000	Page			KCEE	790	5000	Cabot			Greenwood			KBIB	1560	250
Seward			KPGE	1340	1000	KCUB	1290	5000	KBOT	1350	500	KACJ	1510	1000	Monticello		
KRXX	950	1000	Parker			KEVT	690	250	Camden			Hardy			KHBM	1430	1000
Sitka			KZUL	1380	2500	KFLT	1450	1000	KAMD	910	5000	KSRB	1570	1000	Morrilton		
KIFW	1230	1000	Phoenix			KIKX	580	5000	KJWH	1450	1000	Harrison			KVOM	800	250
KSEW	1400	1000	KARZ	960	5000	KMGX	940	1000	Clarksville			KHOZ	900	1000	Mountain Home		
Soldatna						KTKT	990	10000	KLYR	1360	500	Heber Springs			KTLO	1240	1000

Nashville			KXRQ	1530	250	Barstow			Dinuba			KNYO	600	500	Mc Farland		
KBHC	1260	500	Van Buren			KIOT	1310	5000	KRDU	1130	1000	Indio			KXEM	1590	500
Newport			KAYR	1060	500	KWTC	1230	1000	El Cajon			KRCQ	1400	1000	Mendocino		
KNBV	1280	1000	KDFD	1580	1000	Berkeley			KMJC	910	5000	Inglewood			KMFB	1300	5000
North Little Rock			Walnut Ridge			KRE	1400	1000	El Centro			KTYM	1460	5000	Merced		
KDXE	1380	1000	KRLW	1320	1000	Big Bear Lake			KAMP	1430	1000	King City			KMCE	1580	1000
KXLR	1150	5000	Warren			KBBV	1050	250	KXO	1230	1000	KRKC	1490	1000	KYOS	1480	5000
Osceola			KWRF	860	250	Bishop			Escondido			Lake Isabella			Modesto		
KOSE	860	1000	West Helena			KIBS	1230	1000	KOWN	1450	1000	KVLI	1140	500	KBEE	970	1000
Ozark			KCRI	1600	1000	Blythe			Eureka			Lakeport			KFIV	1360	5000
KZRK	1540	500	West Memphis			KYOR	1450	1000	KHUM	790	5000	KBLC	1270	500	KTRB	860	10000
Paragould			KSUD	730	250	Brawley			KINS	980	5000	Lancaster			Mojave		
KDRS	1490	1000	Wynne			KROP	1300	1000	KRED	1480	5000	KAVL	610	1000	KDOL	1340	1000
Paris			KWYN	1400	1000	Burbank			Fortuna			KKZZ	1380	1000	Monterey		
KCCCL	1460	500	Yellville			KROQ	1500	10000	KNCR	1090	10000	Lemoore			KESE	1240	1000
Pine Bluff			KCTT	1530	500	Burney			KJOP			KJOP	1240	1000	KIDD	630	1000
KADL	1270	5000				KAVA	1450	1000	KLIP	1220	250	KQIQ	1320	1000	Morro Bay		
KCAT	1340	1000	CALIFORNIA			Calexico			Fresno			Lodi			KBAI	1150	5000
KCLA	1400	1000	Alturas			KICO	1490	1000	KARM	1430	5000	KQVR	1570	5000	Mt. Shasta		
KOTN	1490	1000	KCNO	570	5000	Carmel			KBIF	900	1000	Lompoc			KWSD	620	1000
KYDE	1590	1000	Anaheim			KRML	1410	500	KEAP	980	500	KLOM	1330	1000	Napa		
Pocahontas			KEZY	1190	5000	Carmichael			KFRE	940	50000	KLVV	1410	500	KVON	1440	5000
KPOC	1420	1000	Apple Valley			KFIA	710	250	KGST	1600	5000	KNEZ	960	500	Needles		
Prescott			KAVR	960	5000	Cathedral City			KIRV	1510	10000	Long Beach			KSFE	1340	1000
KTPA	1370	1000	Aptos Capitola			KWXY	1340	1000	KMAK	1340	1000	KFRN	1280	1000	Oakland		
Rogers			KMFO	1540	10000	Ceres			KMJ	580	5000	KGER	1390	5000	KABL	960	5000
KAMO	1390	1000	Arcata			KLOC	920	500	KXEX	1550	5000	Los Angeles			KDIA	1310	5000
KURM	790	500	KATA	1340	1000	Chico			KYNO	1300	5000	KABC	790	5000	KNEW	910	5000
Russellville			Arroyo Grande			KHSL	1290	5000	Ft. Bragg			KFAC	1330	5000	Oceanside		
KARV	610	1000	KKAL	1280	5000	KPAY	1060	10000	KDAC	1230	1000	KFI	640	50000	KUDE	1320	500
KARV	1490	1000	Auburn			Clovis			Gilroy			KFWB	980	5000	Ontario		
Searcy			KAHJ	950	5000	KXQR	790	500	KAZA	1290	5000	KGFJ	1230	1000	KNSE	1510	10000
KWCK	1300	1000	Avalon			Coachella			Glendale			KHJ	930	5000	Oroville		
Sheridan			KBRT	740	10000	KCHV	970	5000	KIEV	870	5000	KLAC	570	5000	KORV	1340	1000
KKDI	1540	250	Bakersfield			Coalinga			Grass Valley			KMPC	710	50000	Oxnard		
Siloam Springs			KAFY	550	1000	KOLI	1470	5000	KNCO	1250	500	KNX	1070	50000	KOXR	910	5000
KUOA	1290	5000	KERN	1410	1000	Concord			Handford			KPRZ	1150	5000	Palm Desert		
Springdale			KGAM	1230	1000	KWUN	1480	500	KNGS	620	1000	KTNO	1020	50000	- KGUY	1270	1000
KBRS	1340	1000	KHIS	800	250	Corona			Hayward			KZLA	1540	50000	Palm Springs		
KSPR	1590	1000	KNTB	1350	1000	KWRM	1370	5000	KIQI	1010	50000	Los Banos			KCMJ	1010	1000
Stuttgart			KPMC	1560	10000	Crescent City			Hemet			KLBS	1330	500	KCMJ	1140	10000
KWAK	1240	1000	KUZZ	970	1000	KCRE	1310	1000	KHSJ	1320	500	Madera			KDES	920	5000
Texarkana			KWAC	1490	1000	KPOD	1240	1000	Hollister			KHOT	1250	500	KPSI	1450	1000
KOSY	790	1000	Banning			Delano			KMPG	1520	500	Marysville			Palmdale		
Trumann			KGUD	1490	250	KCHJ	1010	5000	Independence			KMYC	1410	5000	KUTY	1470	5000

Palo Alto			KJAY	1430	500	KOFY	1050	1000	Tulare			Boulder			KCOL	1410	1000
KIBE	1220	5000	KRAK	1140	50000	San Rafael			KCOK	1270	5000	KADE	1190	5000	KIIX	600	5000
Paradise			KROY	1240	1000	KTIM	1510	1000	KGEN	1370	1000	KBOL	1490	1000	Ft. Morgan		
KEWQ	930	500	KXOA	1470	5000	Santa Ana			Turlock			Brighton			KFTM	1400	1000
Pasadena			Salinas			KWIZ	1480	5000	KCEY	1390	5000	KBRN	800	500	Glenwood Springs		
KPPC	1240	100	KCTY	980	1000	Santa Brbara			Twentynine Palms			Brush			KGLN	980	1000
KRLA	1110	50000	KDON	1460	5000	KBLS	990	1000	KDHI	1250	1000	KCMP	1010	5000	Grand Junction		
KWKW	1300	5000	KTOM	1380	5000	KDB	1490	1000	Ukiah			Burlington			KEXO	1230	1000
Paso Robles			KWYT	1570	250	KIST	1340	1000	KUKI	1400	1000	KNAB	1140	1000	KQIL	1340	1000
KPRL	1230	1000	San Bernardino			KKIO	1290	500	Vallejo			Canon City			KREX	1100	50000
Petaluma			KCKC	1350	5000	KTMS	1250	1000	KNBA	1190	1000	KRLN	1400	1000	KSTR	620	5000
KTOB	1490	1000	KDIG	1240	1000	Santa Clara			Ventura			Colorado Springs			Greeley		
Pittsburg			KFXM	590	1000	KNTA	1430	1000	KBBQ	1590	5000	KKCS	1530	1000	KFKA	1310	5000
KKIS	990	5000	KMEN	1290	5000	Santa Cruz			KVEN	1450	1000	KPIK	1580	5000	KYOU	1450	1000
Pomona			San Diego			KSCO	1080	10000	Victorville			KRDO	1240	1000	Gunnison		
KLIT	1220	250	KCBQ	1170	50000	Santa Maria			KCIN	1590	500	KSSS	740	1000	KGUC	1490	1000
KWOW	1600	5000	KFMB	760	5000	KSBQ	1480	1000	Visalia			KVOR	1300	5000	La Junta		
Port Hueneme			KGB	1360	5000	KSMA	1240	1000	KONG	1400	1000	KYSN	1460	1000	KBZZ	1400	1000
KACY	1520	50000	KOGO	600	5000	KUHL	1440	5000	Vista			Cortez			Lakewood		
Potterville			KSDO	1130	50000	KZON	1600	500	KMLO	1000	5000	KVFC	740	1000	KLAK	1600	5000
KTIP	1450	1000	KSON	1240	1000	Santa Monica			Wasco			Craig			Lamar		
Quincy			San Fernando			KDAY	1580	50000	KWSO	1050	5000	KRAI	550	5000	KLMR	920	5000
KPCO	1370	500	KGIL	1260	5000	Santa Paula			Watsonville			Delta			Leadville		
Red Bluff			San Francisco			KAAP	1440	1000	KOMY	1340	1000	KOTA	1400	1000	KLRR	1230	1000
KBLF	1490	1000	KCBS	740	50000	Santa Rosa			West Covina			Denver			Littleton		
Redding			KEST	1450	1000	KPLS	1150	5000	KGRB	900	500	KBNO	1220	1000	KDKO	1510	5000
KCLM	1330	5000	KFAX	1100	50000	KSRO	1350	5000	Willits			KDEN	1340	1000	Longmont		
KQMS	1400	1000	KFRC	610	5000	KVRE	1460	1000	KMNO	1250	2500	KERE	710	5000	KLMO	1060	10000
KRDG	1230	1000	KGO	810	50000	Sonora			KIQS	1560	250	KFML	1390	5000	Loveland		
KSXO	600	1000	KKHI	1550	10000	KVML	1450	1000	Willows			KHOW	630	5000	KLOV	1570	1000
KVIP	540	1000	KNBR	680	50000	South Lake Tahoe			Yreka			KIMN	950	5000	Manitou Springs		
Redlands			KSFO	560	5000	KOWL	1490	1000	KSYC	1490	1000	KLDR	1090	50000	KIIQ	1490	500
KCAL	1410	5000	KYA	1260	5000	KTHO	590	2500	Yuba City			KLZ	560	5000	Meeker		
Ridgecrest			San Gabriel			Stockton			KOBO	1450	500	KOA	850	50000	KMKR	1450	1000
KLOA	1240	1000	KALI	1430	5000	KJOY	1280	1000	KUBA	1600	1000	KPOF	910	5000	Monte Vista		
KZIQ	1360	1000	San Jose			KSTN	1420	5000				KRKS	990	5000	KSLV	1240	1000
Riverside			KEEN	1370	5000	KWG	1230	1000				KTLK	1280	5000	Montrose		
KMAY	1570	5000	KLIV	1590	5000	Susville			COLORADO			Durango			KUBC	580	5000
KPRO	1440	1000	KLOK	1170	50000	KSUE	1240	1000	Alamosa			KDGO	1240	1000	Pagosa Springs		
Roseville			KXRX	1500	10000	Taft			KGIW	1450	1000	KIUP	930	5000	KPAG	1400	1000
KPIP	1110	500	San Luis Obispo			KTKR	1310	1000	Arvada			Englewood			Pueblo		
Sacramento			KATY	1340	1000	Thousand Oaks			KQXI	1550	10000	KWBZ	1150	5000	KAPI	690	250
KFBK	1530	50000	KSLY	1400	1000	KGoe	850	500	Aspen			Estes Park			KCSJ	590	1000
KGMS	1380	5000	KVEC	920	1000	Truckee			KSNO	1260	5000	KSIR	1470	1000	KDZA	1230	1000
KGNR	1320	5000	San Mateo			KTRT	1400	1000	Aurora			Ft. Collins			KFEL	970	1000
									KOSI	1430	5000						

KIDN	1350	5000	WTIC	1080	50000	WMMM	1260	1000	WAPR	1390	1000	WNDB	1150	1000	WQDI	1430	500
KPUB	1480	1000	Manchester			Willimantic			Bartow			WROD	1340	1000	Immokalee		
Rifle			WINF	1230	1000	WILI	1400	1000	WBAR	1460	1000	De Funiak Springs			WKEM	1490	1000
KWSR	810	1000	Meriden			Windsor			WPUL	1130	1000	WGTX	1280	5000	Indian Rocks Beach		
Rocky Ford			WMMW	1470	2500	WKND	1480	500	Belle Glade			WZEP	1460	1000	WGNB	1520	1000
KAVI	1320	1000	Middletown						WSWN	900	1000	De Land			Inverness		
Salida			WCNX	1150	1000	DELAWARE			Blountstown			WETO	1490	1000	WYSE	1560	1000
KVRH	1340	1000	Milford			Dover			WKMK	1000	1000	WKKX	1310	5000	Jacksonville		
Steamboat Springs			WFIF	1500	5000	WDOV	1410	5000	Boca Raton			Delray Beach			WAIV	600	5000
KBCR	1230	1000	Naugatuck			WKEN	1600	5000	WSBR	740	1000	WDBF	1420	5000	WAPE	690	50000
Sterling			WNVR	1380	5000	Georgetown			Boynnton Beach			Dunedin			WCGL	1360	5000
KSTC	1230	1000	New Britain			WJWL	900	5000	WKAQ	1510	1000	WAZE	860	500	WCRJ	1530	50000
Trinidad			WRCQ	910	5000	Milford			Bradenton			WWQT	1470	5000	WERD	1400	1000
KCRT	1240	250	WRYM	840	1000	WAFB	930	500	WBRD	1420	1000	Dunnellon			WEXI	1280	5000
Walsenburg			New Haven			Newark			WTRL	1490	1000	WGAM	920	500	WJAX	930	5000
KFLJ	1380	1000	WAVZ	1300	1000	WNRK	1260	1000	Brooksville			Englewood			WKTZ	1220	5000
Windsor			WELI	960	5000	Seaford			WWJB	1450	1000	WENG	1530	1000	WOZN	970	5000
KUAD	1170	1000	WNHC	1340	1000	WSDO	1280	1000	Chattahoochee			Eustis			WPDQ	1460	5000
Wray			New London			Wilmington			WENO	1580	5000	WLCQ	1240	1000	WROS	1050	5000
KRDZ	1470	1000	WNLC	1510	10000	WAMS	1380	5000	Chiefland			Fernandina Beach			WVOJ	1320	5000
KRDZ	1440	5000	Norwalk			WDEL	1150	5000	WLQH	940	1000	WYHI	1570	1000	Jacksonville Beach		
			WNLC	1350	1000	WILM	1450	1000	Chipley			Ft. Lauderdale			WBIX	1010	10000
			Norwich			WJBR	1290	1000	WBGC	1240	1000	WAVS	1190	5000	Jupiter		
			WICH	1310	5000				Cearwater			WFTL	1400	1000	WVSI	1000	1000
CONNECTICUT			Old Saybrook			DISTRICT OF COLUMBIA			WTAN	1340	1000	WSRF	1580	10000	Key West		
Ansonia			WLIS	1420	500	Washington			Cocoa			Ft. Myers			WKIZ	1500	250
WADS	690	1000	Putnam			WGMS	570	5000	WCWR	1350	1000	WCAI	1350	1000	WKWF	1600	500
Bridgeport			WINY	1350	1000	WMAL	630	5000	WKKO	860	1000	WINK	1240	1000	Kissimmee		
WDJZ	1530	5000	Ridgefield			WOL	1450	1000	WWBC	1510	1000	WMYR	1410	5000	WFIV	1080	5000
WICC	600	1000	WVFR	850	250	WRC	980	5000	Cocoa Beach			Ft. Pierce			WMJK	1220	1000
WNAB	1450	1000	Southington			WTOP	1500	50000	WRKT	1300	5000	WFTF	1330	1000	Lake City		
Bristol			WNTY	990	500	WUST	1120	1000	Coral Gables			WIRA	1400	1000	WDSR	1340	1000
WBIS	1440	500	Stamford			WWDC	1260	5000	WRHC	1550	10000	Ft. Walton Beach			WGRO	960	1000
Brokfield			WSTC	1400	1000	WYCB	1340	1000	WVCG	1180	50000	WDIS	1260	2500	Lake Wales		
WINE	940	1000	Torrington			FLORIDA			WNUE			WNUE	1400	1000	WIPC	1280	1000
Danbury			WSNG	610	1000	Apopka			WBAS	1330	1000	Gainesville			Lake Worth		
WLAD	800	1000	Vernon			WTLN	1520	5000	Crestview			WAKA	1390	5000	WLIZ	1380	1000
Greenwich			WRTT	1170	1000	Arcadia			WCNU	1010	1000	WDVH	980	5000	Lakeland		
WGCH	1490	1000	Waterbury			WAPG	1480	1000	WJSB	1050	5000	WGGG	1230	1000	WONN	1230	1000
Groton			WATR	1320	5000	Atlantic Beach			Cypress Gardens			WRUF	850	5000	WOPD	1430	5000
WSUB	980	1000	WQOW	1590	5000	WJNJ	1600	5000	WGTO	540	50000	Haines City			WWAB	1330	1000
Hamden			WWCO	1240	1000	Auburndale			Dade City			WFXI	930	500	Largo		
WOMN	1220	1000	West Hartford			WTWB	1570	5000	WDCF	1350	1000	Wollywood			WSST	800	250
WCCC	1290	5000	WMLB	1550	1000	Avon Park			Daytona Beach			WLQY	1320	5000	Leesburg		
WDRG	1360	5000	Westport						WMFJ	1450	1000	Homestead			WLBE	790	5000
WPOP	1410	5000															

WZST	1410	5000	WEXY	1520	1000	WPLA	910	1000	Tampa			Americus			WGIG	1440	5000
Lehigh Acres			Ocala			Pompano Beach			WDAE	1250	5000	WDEC	1290	1000	WMOG	1490	1000
WAYK	1440	5000	WMOP	900	5000	WPIR	980	2500	WFLA	970	5000	WISK	1390	5000	WYNR	790	500
Live Oak			WTMC	1290	5000	WRBD	1470	5000	WHBO	1050	250	Ashburn			Buford		
WNER	1250	1000	WWKE	1370	5000	Port St. Joe			WINQ	1010	50000	WMES	1570	1000	WDYX	1460	5000
Madison			Ocoee			WJOE	1080	1000	WSOL	1300	5000	Athens			Cairo		
WMAF	1230	1000	WVCF	1480	1000	Punta Gorda			WTIS	1110	10000	WCCD	1470	1000	WGRA	790	1000
Marathon			Okeechobee			WCCF	1580	1000	WYOU	1550	10000	WGAU	1340	1000	Calhoun		
WFFG	1300	500	WOKC	1570	1000	Quincy			Teple Terrace			WRFC	960	5000	WEBS	1110	250
Marco Island			Orange Park			WCNH	1230	1000	WTMP	150	5000	Atlanta			Camilla		
WMIG	1510	1000	WAYR	550	1000	Riviera Beach			Titusville			WAEC	860	1000	WCLB	1220	1000
Marianna			Orlando			WPOM	1600	1000	WAMT	1060	10000	WAOK	1380	5000	Canton		
WTOT	980	1000	WDBO	580	5000	Sanford			Valparaiso			WGKA	1190	5000	WCHK	1290	5000
WTYS	1340	1000	WHOO	990	50000	WTRR	1400	1000	WFSH	1340	1000	WGST	920	5000	Carrollton		
Melbourne			WKIS	740	5000	Sarasota			Venice			WGUN	1010	50000	WLBB	1100	1000
WMEL	920	1000	WLQF	950	5000	WKXY	930	1000	WAMR	1320	500	WIGO	1340	1000	WPPI	1330	500
WMMB	1240	1000	WORL	1270	5000	WQSA	1220	1000	Vero Beach			WKLS	970	5000	Cartersville		
WTAI	1560	5000	Ormond Beach			WSPB	1450	1000	WAXE	1370	1000	WPLO	590	5000	WBHF	1450	1000
Miami			WDAT	1380	5000	WWZZ	1280	500	WTTB	1490	1000	WQXI	790	5000	WKRW	1270	500
WCMQ	1220	1000	Palatka			Sebring			Wauchula			WSB	750	50000	Cedartown		
WGBS	710	50000	WIYD	1260	1000	WJCM	960	1000	WAUC	1310	5000	WYZE	1480	5000	WGAA	1340	1000
WHTT	1260	5000	WSUZ	800	1000	WSEB	1340	1000	West Palm Beach			Augusta			Clarksville		
WINZ	940	50000	Palm Beach			South Daytona			WEAT	850	1000	WBBO	1340	1000	WIAF	1500	5000
WIOD	610	5000	WPBR	1340	1000	WELE	1590	1000	WIRK	1290	5000	WBIA	1230	1000	Claxton		
WOCN	1450	1000	Panama City			South Miami			WJNO	1230	1000	WGAC	580	5000	WCLA	1470	1000
WQAM	560	5000	WDLP	590	1000	WNWS	790	5000	Winter Garden			WGUS	1380	1000	Clayton		
WQBA	1140	10000	WWWQ	1430	5000	St. Augustine			WOKB	1600	5000	WHGI	1050	5000	WGHC	1570	1000
Miami Beach			Panama City Beach			WAOC	1420	1000	Winter Haven			WRDW	1480	5000	Cleveland		
WKAT	1360	5000	WGNE	1480	500	WFOY	1240	1000	WSIR	1490	1000	WTHB	1550	5000	WRWH	1350	1000
WMBM	1490	1000	WPCF	1290	500	St. Petersburg			WZNG	1360	5000	Austell			Cochran		
Milton			Pensacola			WLCY	1380	5000	Winter Park			WACX	1600	1000	WVMG	1440	1000
WCKC	1490	1000	WBOP	980	1000	WSUN	620	5000	WAJL	1440	5000	Bainbridge			Columbus		
WFGS	1330	5000	WBSR	1450	1000	WWSA	680	1000	Zephyr Hills			WAZA	1360	5000	WCLS	1580	1000
Monticello			WCOA	1370	5000	St. Petersburg Beach			WPAS	1400	1000	WMGR	930	5000	WDAK	540	5000
WMFL	1090	1000	WHYM	610	500	WRXB	1590	1000	GEORGIA			Barnesville			WHYD	1270	5000
Mt. Dora			WNVY	1230	1000	Starke						WBAF	1090	1000	WOKS	1340	1000
WGTW	1580	5000	WPFA	790	1000	St. Petersburg						Baxley			WRCG	1420	5000
Naples			Perry			Stuart			Adel			WUFE	1260	5000	Commerce		
WNOG	1270	500	WGKR	1310	1000	WSTU	1450	1000	Albany			Blackshear			WJJC	1270	1000
New Port Richey			WPRY	1400	1000	Tallahassee			WALG	1590	5000	WBSG	1350	2500	Cordele		
WGUL	1500	250	Pine Castle			WANM	1070	10000	WGPC	1450	1000	Blakely			WMJM	1490	1000
New Smyrna Beach			WHHL	1190	1000	WCVC	1330	5000	WJAZ	960	5000	WBBK	1260	1000	Cornelia		
WCCZ	1550	250	Pinellas Park			WKQE	1410	5000	WQDE	1250	1000	Bremen			WCON	1450	1000
WSBB	1230	1000	WPLP	570	1000	WTAL	1450	1000	Alma			WWCC	1440	2500	Covington		
Oakland Park			Plant City			WTNT	1270	5000	WULF	1400	1000	Brunswick			WGFS	1430	1000

Coyners			Garden City			Marietta			WROM	710	1000	Trenton			KORL	650	10000
WCGA	1050	250	WNMT	1520	1000	WCOB	1080	10000	Rossville			WADX	1420	500	KPOI	1040	10000
Cuming			Glennville			WFOM	1230	1000	WRIP	980	500	Valdosta			KSSK	590	5000
WHNE	1170	1000	WKIG	1580	1000	Mc Donough			Royston			WGAF	910	5000	KUMU	1500	5000
Cuthbert			Gordon			WZAL	1540	2500	WBLW	810	250	WGOV	950	5000	KZOO	1210	1000
WCUG	850	500	WIZY	1560	5000	Mc Rae			Sandersville			WJEM	1150	1000	Kahului		
Dallas			Griffin			WDAX	1410	1000	WSNT	1490	1000	WVLD	1450	1000	KNUI	900	25000
WKRP	1500	1000	WGRI	1410	1000	Metter			Savannah			Vidalia					
Dalton			WHIE	1320	5000	WMAC	1360	500	WEAS	900	5000	WVOP	970	5000	IDAHO		
WBLJ	1230	1000	WKEU	1450	1000	Milledgeville			WKBX	630	5000	WYOK	1000	1000	Blackfoot		
WRCD	1430	1000	Hartwell			WMVG	1450	1000	WQQT	1450	1000	Vienna			KBLI	690	1000
WTTI	1530	10000	WKLY	980	1000	WXLX	1060	1000	WSGA	1400	1000	WWWN	1550	250	Boise		
Dawson			Hawkinsville			Millen			WSOK	1230	1000	Warner Robbins			KBOI	670	50000
WDWD	990	1000	WCEH	610	500	WGSR	1570	1000	WWSA	1290	5000	WAVC	1350	5000	KBRJ	950	5000
Decatur			Hazlehurst			Monroe			Smyrna			WRBN	1600	2500	KGEM	1140	10000
WAVO	1420	1000	WVOH	920	500	WKUN	1580	1000	WYNX	1550	10000	Washington			KIDO	630	5000
WXLL	1310	500	Hinesville			WRED	1490	1000	Statesboro			WLOV	1370	1000	KSPD	790	1000
Donaldsonville			WGML	990	250	Montezuma			WPTB	850	1000	Waycross			KYME	740	500
WSEM	1500	1000	Jasper			WMNZ	1050	250	WWNS	1240	1000	WACL	570	5000	Bonniers Ferry		
Douglas			WYYZ	1490	1000	Morrow			Summerville			WAYX	1230	1000	KBFI	1450	1000
WDMG	860	5000	WYYZ	1580	250	WSSA	1570	5000	WGTA	950	5000	Waynesboro			Burley		
WOKA	1310	1000	Jessup			Moultrie			Swainsboro			WBRO	1310	1000	KBAR	1230	1000
Douglasville			WLOP	1370	5000	WMGA	1130	10000	WJAT	800	1000	West Point			Caldwell		
WDGL	1520	1000	La Grange			WMTM	1300	5000	WXRS	1590	2500	WZZZ	1310	1000	KBGN	1060	10000
Dublin			WLAG	1240	1000	Nashville			Sylvania			Winder			KCID	1490	1000
WMLT	1330	5000	WTRP	620	1000	WNGA	1600	1000	WSYL	1490	1000	WIMO	1300	1000	Coeur D'Alene		
WXLJ	1230	1000	Lafayette			Newnan			Sylvester						KVNI	1080	10000
East Point			WLFA	1590	5000	WCOH	1400	1000	WRSO	1540	1000	HAWAII			Grangeville		
WTJH	1260	5000	Lawrenceville			WNEA	1300	500	Tallapoosa			Elelele			KORT	1230	1000
Eastman			WLAW	1360	1000	North Atlanta			WKNG	1060	5000	KUAI	720	5000	Hiley		
WUFF	710	1000	Louisville			WRNG	680	25000	Thomaston			Hilo			KSKI	1340	1000
Eaton			WPEH	1420	1000	Ocala			WSFT	1220	250	KHLO	850	1000	Idaho Falls		
Elberton			WPGH	1420	1000	WSIZ	1380	5000	WTGA	1590	500	KIPA	620	5000	KID	590	5000
WSPC	1400	1000	Lyons			Perry			Thomasville			KPUA	670	5000	KTEE	1260	5000
WSPC	1400	1000	WBBT	1340	1000	WPGA	980	1000	WLOR	730	5000	Honolulu			KUPI	980	1000
Ellijay			Macon			Quitman			WPAX	1240	1000	KAIM	870	50000	Jerome		
WLEJ	1560	250	WBML	900	250	WFSB	1490	250	Thomson			KCCN	1420	5000	KART	1400	1000
Fitzgerald			WDDO	1240	1000	Reidsville			WTHO	1530	1000	KGU	760	10000	Lewiston		
WBHB	1240	1000	WDBN	1500	1000	WTNL	1390	500	WTTA	1240	1000	KHVH	990	5000	KOZE	1300	5000
Ft. Valley			WBWB	1280	5000	Rockmart			Tifton			KIKI	830	10000	KRLC	1350	5000
WFM	1150	1000	WMAZ	940	50000	WPLK	1220	500	WTIF	1340	1000	KIOE	1080	5000	Mc Call		
Gainesville			WNEK	1400	1000	Rome			WWGS	1430	5000	KISA	1540	5000	KMCL	1240	500
WDUN	1240	1000	Madison			WIYN	1360	500	Toccoa			KKUA	690	10000	Montpelier		
WGGA	550	5000	WYTH	1250	1000	WLQ	1410	1000	WLET	1420	5000	KNDI	1270	5000	KVSI	1450	1000
WLBA	1130	10000	Manchester			WRGA	1470	5000	WNEG	630	500	KOHO	1170	5000	Moscow		
			WFDR	1370	1000												

KRPL	1400	1000	WFVR	1580	250	WMPP	1470	1000	WGNU	920	500	Mc Leansboro			WRTL	1460	500
Mountain Home			WMRO	1280	2500	Cicero			Harrisburg			WMCL	1060	2500	Robinson		
KFLI	1240	1000	Beardstown			WCEV	1450	1000	WEBQ	1240	1000	Mendota			WTAY	1570	250
Nampa			WRMS	790	500	WXOL	1450	1000	Harvard			WGLC	1090	250	Rochelle		
KAIN	1340	1000	Belleville			Clinton			WMCW	1600	500	Metropolis			WRHL	1060	250
KFXD	580	5000	WIBV	1260	5000	WHOW	1520	5000	Harvey			WMOK	920	1000	Rock Island		
Orofino			Bloomington			Crystal Lake			WBEE	1570	1000	Moline			WHBF	1270	5000
KLER	950	1000	WJBC	1230	1000	WIVS	850	500	Herrin			WQUA	1230	1000	Rockford		
Payette			Cairo			Danville			WHPI	1340	1000	Monmouth			WKKN	1150	1000
KYET	1450	250	WKRO	1490	1000	WDAN	1490	1000	Highland			WRAM	1330	1000	WROK	1440	5000
Pocatello			Canton			WITY	980	1000	WINU	1510	1000	Morris			WRRR	1330	1000
KISU	1290	1000	WBYS	1560	250	De Kalb			Highland Park			WCSJ	1550	250	Salem		
KSEI	930	5000	Carbondale			WLBK	1360	1000	WEEF	1430	1000	Mt. Carmel			WJBD	1350	500
KWIK	1240	1000	WCIL	1020	1000	Decatur			WJIL	1550	1000	WYER	1360	500	Shelbville		
Preston			Carmi			WDZ	1050	1000	Jerseyville			Mt. Vernon			WSHY	1560	500
KACH	1340	1000	WROY	1460	1000	WSOY	1340	1000	WJBM	1480	500	WMIX	940	5000	Sparta		
Rexburg			Carthage			Dixon			WJOL	1340	1000	Murphysboro			WHCO	1230	1000
KRXK	1230	1000	WCAZ	990	1000	Du Quoin	1460	1000	WJRC	1510	500	WINI	1420	500	Springfield		
Rupert			Casey			WQIN			WJRK			Normal			WCVS	1450	1000
KAYT	970	1000	WKZI	800	250	WQON	1580	250	WDDW	810	250	WRBA	1440	1000	WMAY	970	1000
Salmon			Centralia			East Moline			Joliet			Oak Park			WTAX	1240	1000
KSRA	960	1000	WILY	1210	1000	WDLM	960	1000	WJOL	1340	1000	WOPA	1490	1000	Sterling		
Sandpoint			Champaign			East St. Louis			WJRC	1510	500	Olney			WSDR	1240	500
KSPT	1400	1000	WDWS	1400	1000	WESL	1490	1000	Kankakee			WVLN	740	250	Streator		
Soda Springs			Charleston			Effingham			WKAN	1320	1000	Ottawa			WIZZ	1250	500
KBRV	790	5000	WEIC	1270	1000	WCRA	1090	1000	Kewanee			WCMY	1430	500	Taylorville		
St. Anthony			Chester			Elgin			WKEI	1450	500	Paris			WTIM	1410	1000
KIGO	1400	1000	KSGM	980	1000	WRMN	1410	1000	La Grange			WPRS	1440	1000	Urbana		
St. Marias			Chicago			Elmhurst			WTAQ	1300	5000	Pekin			WCCR	1580	250
KOFE	1490	1000	WAIT	820	5000	WKDC	1530	250	La Salle			WVEL	1140	5000	WILL	580	5000
Twin Falls			WBBM	780	50000	Evanston			WLPO	1220	1000	Peoria			Vandalia		
KEEP	1450	1000	WCFL	1000	50000	WONX	1590	1000	Lawrenceville			WIRL	1290	5000	WPMB	1500	250
KLIX	1310	5000	WCRW	1240	1000	WPRZ	1330	5000	WAKO	910	500	WMBD	1470	5000	Watseka		
KTLC	1270	5000	WEDC	1240	1000	Fairfield			Lincoln			WPEO	1020	1000	WGFA	1360	1000
Wallace			WGN	720	50000	WFIW	1390	1000	WPRC	1370	1000	WXCL	1350	1000	Waukegan		
KWAL	620	1000	WIND	560	5000	Freeport			Litchfield			Pittsfield			WKRS	1220	1000
Weiser			WJJD	1160	50000	WFRL	1570	5000	WSMI	1540	1000	WBBA	1580	250	West Frankfort		
KWEI	1260	1000	WJPC	950	5000	Galesburg			Loves Park			Pontiac			WFRX	1300	1000
			WLS	890	50000	WAIK	1590	5000	WLUV	1520	500	WPOK	1080	1000	Wood River		
ILLINOIS			WMAQ	670	50000	WGIL	1400	1000	Macomb			Princeton			WRTH	590	1000
Alton			WMBI	1110	5000	Geneseo			WKAI	1510	1000	WZOE	1490	1000	Zion		
WOKZ	1570	1000	WSBC	1240	1000	WGEN	1500	250	Marion			Quincy			WKZN	1500	250
Anna			WVON	1390	5000	Geneva			WGGH	1150	5000	WGEM	1440	5000			
WRAJ	1440	500	Chicago Heights			WGSB	1480	1000	Mattoon			WTDAD	930	5000	INDIANA		
Aurora			WCGO	1600	1000	Granite City			WLBH	1170	5000	Rantoul			Anderson		

WHBU	1240	1000	Greensburg			WERK	990	250	WAKE	1500	1000	KCHE	1440	500	WSUI	910	5000
WHUT	1470	1000	WTRE	1330	500	WLBC	1340	1000	WNWI	1080	250	Clinton			Iowa Falls		
Auburn			Hammond			New Albany			Vincennes			KLNT	1390	1000	KIFG	1510	1000
WIFF	1570	500	WJOB	1230	1000	WDGS	1290	500	WAOV	1450	1000	KROS	1340	1000	Keokuk		
Bedford			Huntington			WOBS	1570	1000	Wabash			Council Bluffs			KOKX	1310	1000
WBIW	1340	1000	WHLT	1300	500	New Castle			WAYT	1510	250	KLNG	1560	1000	Knoxville		
Beech Grove			Indianapolis			WCTW	1550	250	Warsaw			Creston			KNIA	1320	500
WNTS	1590	5000	WAT1	810	250	Noblesville			WRSW	1480	1000	KSIB	1520	1000	Le Mars		
Bloomington			WBRI	1500	5000	WFBM	1110	1000	Washington			Davenport			KLEM	1410	1000
WTTS	1370	5000	WIBC	1070	50000	North Vernon			WAMW	1580	250	KSTT	1170	1000	Maquoketa		
Boonville			WIFE	1310	5000	WOCH	1460	1000	West Lafayette			KWNT	1580	500	KMAQ	1320	500
WBNL	1540	250	WIRE	1430	5000	Paoli			WBAA	920	5000	WOC	1420	5000	Marshalltown		
Brazil			WNDE	1260	5000	WUME	1560	250				Decorah			KDAO	1190	250
WWCM	1130	500	WXLW	950	5000	Peru						KDEC	1240	1000	KFJB	1230	1000
Columbus			Jasper			WARU	1600	1000	IOWA			KWLC	1240	1000	Mason City		
WCSI	1010	500	WITZ	990	1000	Plymouth			Albia			Denison			KGLO	1300	5000
Conersville			Jeffersonville			WTCA	1050	250	KLBA	1370	500	KDSN	1530	500	KRIB	1490	1000
WCNB	1580	250	WXVW	1450	1000	Portland			KLGA	1600	5000	Des Moines			KSMN	1010	1000
Corydon			Kendallville			WPGW	1440	500	Ames			KCBC	1390	1000	Mt. Pleasant		
WJDW	1550	250	WAWK	1140	250	Princeton			KASI	1430	1000	KIOA	940	10000	KKSI	1130	250
Crawfordsville			Knox			WRAY	1250	1000	WOI	640	5000	KRNT	1350	5000	Muscataine		
WCVL	1550	250	WKVI	1520	250	Rensselaer			Anamosa			KSO	1460	5000	KWPC	860	250
Decatur			Kokomo			WRIN	1560	1000	KLEH	1290	500	KWKY	1150	1000	Newton		
WADM	1540	250	WIOU	1350	5000	Richmond			Atlantic			WHO	1040	50000	KCOB	1280	1000
Elkhart			La Porte			WHON	930	500	KJAN	1220	250	Dubuque			Oelwein		
WCMR	1270	5000	WLOI	1540	250	WKBV	1490	1000	Boone			KDTH	1370	5000	KOEL	950	5000
WTRC	1340	1000	Lafayette			Salem			KFGQ	1260	1000	WDBQ	1490	1000	Oskaloosa		
Evansville			WASK	1450	1000	WSLM	1220	5000	KWBG	1590	1000	Estherville			KBOE	740	250
WGBF	1280	5000	WAZY	1410	1000	Seymour			Burlington			KILR	1070	250	Ottumwa		
WIKY	820	250	Linton			WJCD	1390	1000	KBUR	1490	1000	Fairfield			KBIZ	1240	1000
WKKR	1330	5000	WBTO	1600	500	Shelbyville			KCPS	1150	500	KMCD	1570	250	KLEE	1480	500
WROZ	1400	1000	Logansport			WSVL	1520	1000	Carroll			Ft. Dodge			Perry		
Frankfort			WSAL	1230	1000	South Bend			KCIM	1380	1000	KVFD	1400	1000	KDLS	1310	500
WILO	1570	250	Madison			WJVA	1580	1000	Cedar Falls			KWMT	540	5000	Red Oak		
Ft. Wayne			WORX	1270	1000	WNDU	1490	1000	KCFI	1250	500	Ft. Madison			KOAK	1080	250
WFCV	1090	1000	Marion			WSBT	960	5000	Cedar Rapids			KBKB	1360	1000	Sheldon		
WGL	1250	1000	WBAT	1400	1000	Sullivan			KCDR	1450	1000	Grinnell			KIWA	1550	500
WLYV	1450	500	WGOM	860	250	WNDI	1550	250	KCRG	1600	5000	KGRN	1410	500	Shenandoah		
WOWO	1190	50000	Martinsville			Tell City			KHAK	1360	1000	Independence			KMA	960	5000
WQHK	1380	5000	WCBK	1540	500	WTCJ	1230	1000	WMT	600	5000	KOUR	1220	250	KYFR	920	2500
Gary			Michigan City			Terre Haute			Centerville			Iadianola			Sioux Center		
WLTH	1370	1000	WIMS	1420	5000	WAAC	1300	500	KCOG	1400	1000	KBAB	1490	500	KVDB	1090	500
WWCA	1270	1000	Mount Vernon			WBOW	1230	1000	Charles City			Iowa City			Sioux City		
Goshen			WPCO	1590	500	WTHI	1480	5000	KCHA	1580	500	KCJJ	1560	1000	KMNS	620	1000
WKAM	1460	1000	Muncie			Valparaiso			Cherokee			KXIC	800	1000	KSCJ	1360	5000

KWSL	1470	5000	Fort Scott			Ottawa			WYWY	950	1000	WSRG	1070	250	WSLK	1600	500
Spencer			KMDO	1600	1000	KOFO	1220	250	Bardstown			Eminence			Inez		
KICD	1240	1000	Garden City			Parsons			WBRT	1320	1000	WSTL	1600	500	WFJT	1590	1000
Storm Lake			KBUF	1050	5000	KLKC	1540	250	Benton			Frankfort			Irvine		
KAYL	990	250	KIUL	1240	1000	Phillipsburg			WCBL	1290	5000	WKFY	1490	1000	WIRV	1550	1000
Washington			Goodland			KKAN	1490	1000	Berea			WKED	1130	500	Jackson		
KCII	1380	500	KLOE	730	1000	Pittsburg			WKXO	1500	250	Franklin			WEKG	810	1000
Waterloo			Great Bend			KOAM	860	10000	Bowling Green			WFKN	1220	250	Jamestown		
KLEU	850	500	KVGB	1590	5000	KSEK	1340	1000	WBGN	1340	1000	Ft. Campbell			WKYJ	1060	2500
KNWS	1090	1000	Hays			Pratt			WKCT	930	1000	WABD	1370	1000	Jenkins		
KWWL	1330	5000	KAYS	1400	1000	KWLS	1290	5000	WLBj	1410	5000	Ft. Knox			WREM	1000	1000
KXEL	1540	50000	Hutchinson			Russell			Buffalo			WSAC	1470	1000	Lancaster		
Waukon			KWBW	1450	1000	KRSL	990	250	WLCB	1430	500	Fulton			WIXI	1280	1000
KNEI	1140	1000	KWHK	1260	1000	Salina			Burkesville			WFUL	1270	1000	Lebanon		
Waverly			Independence			KFRM	550	5000	WKYR	1570	1000	Georgetown			WLBn	1590	1000
KWAY	1470	1000	KIND	1010	250	KINA	910	500	Cadiz			WAXU	1580	10000	Leitchfield		
Webster City			Iola			KSAL	1150	5000	WKDZ	1110	1000	Glasgow			WMTL	1580	250
KQWC	1570	250	KIKS	1370	500	Scott City			Campbellsville			WCDS	1440	5000	Lexington		
KANSAS			Junction City			KFLA	1310	500	WCKQ	1450	1000	WKAY	1490	1000	WLAP	630	5000
Abilene			KJCK	1420	1000	Topeka			Cave City			WGOH			WTKC	1300	2500
KABI	1560	250	Kansas City			KSKX	1440	5000	WKVE	800	250	Greensburg			WVLK	590	5000
Arkansas City			KCKN	1340	1000	KTOP	1490	1000	Central City			WGRK	1550	250	Liberty		
KSOK	1280	1000	Larned			WIBW	580	5000	WMTA	1380	500	WGRK	1540	1000	WKDO	1560	250
Atchison			KANS	1510	1000	WREN	1250	5000	WNES	1050	500	Hardinsburg			London		
KARE	1470	1000	Lawrence			Ulysses			Columbia			WHIC	1520	250	Louisville		
Beloit			KFKU	1250	5000	KULY	1420	1000	WAIN	1270	1000	Harlan			WVKA	1270	1000
KRZJ	1190	2500	KLWN	1320	500	Wellington			Corbin			WFSR	1470	1000	Louisville		
Chanute			Leavenworth			KLEY	1130	250	WCTT	680	1000	WHLN	1410	5000	WAKY	790	5000
KKOY	1460	1000	KCLO	1410	5000	Wichita			WYGO	1330	5000	Harrodsburg			WAVE	970	5000
Coffeyville			Liberal			KAKZ	1240	1000	Covington			WHBN	1420	1000	WCII	1080	10000
KGGF	690	10000	KLIB	1470	1000	KFDI	1070	10000	WCLU	1320	500	Hartford			WFIA	900	1000
Colby			KSCB	1270	1000	KFH	1330	5000	Cumberland			WLLS	1600	1000	WHAS	840	50000
KXXX	790	5000	Manhattan			KQAM	1410	5000	WCPM	1280	1000	Hawesville			WINN	1240	1000
Concordia			KMAN	1350	500	KSGL	900	250	Cynthiana			WKCM	1140	2500	WLOU	1350	5000
KNCK	1390	500	KSAC	580	5000	KWKN	1480	5000	WCYN	1400	500	Hazard			WTMT	620	500
Dodge City			Marysville			Winfield			Danville			WKIC	1390	5000	Madisonville		
KEDD	1550	1000	KNDY	1570	250	KNIC	1550	250	WHIR	1230	1000	Henderson			WFMW	730	500
KGNO	1370	5000	Mc Pherson			KENTUCKY			WKLO	1000	1000	WSON	860	500	WTTL	1310	1000
El Dorado			KNEX	1540	250	Albany			WEAK	900	250	Hindman			Manchester		
KOYY	1360	500	Mission			WANY	1390	1000	Elizabethtown			WKCB	1340	1000	WXXL	1450	1000
Emporia			KBEA	1480	1000	Ashland			WIEL	1400	1000	Hopkinsville			Marion		
KVOE	1400	1000	Newton			WCMi	1340	1000	Elkhorn City			WHOP	1230	1000	WMJL	1500	250
Fairway			KJRG	950	500	WTCR	1420	5000	WBPA	1460	1000	WKOA	1480	1000	Martin		
KCNW	1380	5000	Norton			Barbourville			Elkton			Hyden			WMDJ	1440	2500
			KQNK	1530	1000												

Mayfield			Pineville			LOUISIANA			WFCG	1110	1000	Morgan City			WSDL	1560	1000
WNGO	1320	1000	WANO	1230	1000	Abbeville			Garyville			KMRC	1430	500	Springhill		
WYMC	1430	1000	Pittsburg			KROF	960	1000	WKOT	1010	500	Natchitoches			KBSF	1460	1000
Maysville			WLPQ	1600	500	Alexandria			Golden Meadow			KNOC	1450	1000	Sulphur		
WFTM	1240	1000	Prestonburg			KALB	580	5000	KLEB	1600	1000	New Iberia			KEZM	1310	500
Middlesboro			WDOC	1310	5000	KDBS	1410	1000	Gonzales			KANE	1240	1000	Tallulah		
WFXV	1560	1000	WPRT	960	5000	KSYL	970	1000	WSLG	1090	10000	KNIR	1360	1000	KTLD	1360	500
WMIK	560	500	Princeton			Amite			Gretna			New Orleans			Thibodaux		
Monticello			WPKY	1580	250	WABL	1570	500	KGLA	1540	500	WBOK	1230	1000	KTIB	630	500
WFLW	1360	1000	Richmond			Bastrop			Hammond			WGSO	1280	5000	Ville Platte		
Morehead			WCBR	1110	250	KTRY	730	250	WFPR	1400	1000	WNNR	990	250	KVPI	1050	250
WMOR	1330	1000	WEKY	1340	1000	KVOB	1340	1000	Haynesville			WNOE	1060	50000	Vivian		
Morganfield			Russellville			Baton Rouge			KLUV	1580	1000	WSHO	800	1000	KNCB	1320	5000
WMSK	1550	250	WRUS	610	500	WIBR	1300	5000	Houma			WSMB	1350	5000	Washington		
Morgantown			Saylesville			WJBO	1150	5000	KJJN	1490	1000	WTIX	690	10000	KNEK	1190	250
WLBQ	1570	250	WRLV	1140	1000	WLCS	910	1000	Jena			WVOG	600	1000	West Monroe		
Mt. Sterling			Scottsville			WLUX	1550	5000	KCKW	1480	500	WWIW	1450	1000	KUZN	1310	1000
WMST	1150	500	WLCK	1250	500	WTKL	1260	1000	Jennings			WWL	870	50000	White Castle		
Mt. Vernon			Shelbyville			WXOK	1460	5000	KJEF	1290	1000	WYLD	940	10000	KKAY	1590	1000
WRVK	1460	500	WCND	940	250	WYNK	1380	5000	Jonesboro			New Roads			Winnfield		
Munfordville			Somerset			Bayou Vista			KTOC	920	1000	KQXL	1500	1000	KVCL	1270	1000
WLOC	1150	1000	WSFC	1240	1000	KQKI	1170	500	Lafayette			Oak Grove			Winnboro		
Murray			WTLO	1480	1000	Bogalusa			KPEL	1420	1000	KWCL	1280	1000	KMAR	1570	1000
WNBS	1340	1000	Stanford			WBOX	920	1000	KVOL	1330	5000	Oakdale					
WSJP	1130	250	WRSI	1520	500	WIKC	1490	1000	KXKW	1520	10000	KREH	900	250	MAINE		
Neon			Stanton			Columbia			Lake Charles			Opelousas			Auburn		
WNKY	1480	1000	WBFC	1470	1000	KCTO	1540	1000	KAOK	1400	1000	KSLO	1230	1000	WRXV	1530	1000
Newport			Tomkinsville			Covington			KLCL	1470	5000	Pineville			Augusta		
WNOP	740	1000	WTKY	1370	2500	WARB	730	250	KLOU	1580	1000	KPAL	1110	500	WFAU	1340	1000
Nicholasville			Vanceburg			Croley			Lake Providence			Port Sulphur			WRDO	1400	1000
WNVL	1250	500	WKKS	1570	1000	KAJN	1560	1000	KLPL	1050	250	KAGY	1510	1000	Bangor		
Owensboro			Vancleve			KSIG	1450	1000	Leesville			Ryville			WABI	910	5000
WOMI	1490	1000	WMTC	730	1000	De Ridder			KLLA	1570	1000	KRIH	990	250	WGUY	1250	5000
WVJS	1420	5000	West Liberty			KDLA	1010	1000	Mansfield			Ruston			WLBZ	620	5000
Paducah			WLKS	1450	1000	Denham Springs			KDXI	1360	1000	KRUS	1490	1000	Bath		
WDXR	1450	1000	Whitesburg			WLBI	1220	250	Many			Shreveport			WJTO	730	1000
WKYX	570	1000	WTCW	920	5000	Eunice			KWLA	1400	1000	KBCL	1220	250	Belfast		
WPAD	1560	10000	Whitley City			KEUN	1490	1000	Marksville			KCIJ	980	5000	WBME	1230	250
Paintsville			WEQO	1220	1000	Farmerville			KAPB	1370	1000	KEEL	710	50000	Biddeford		
WSP	1490	1000	Wickliffe			KTDL	1470	1000	Minden			KFLO	1300	500	WIDE	1400	1000
Paris			WBCE	1010	250	Ferriday			KASO	1240	1000	KJOE	1480	1000	Brunswick		
WBGR	1440	1000	Williamsburg			KFNV	1600	1000	Monroe			KOKA	1550	10000	WKXA	900	1000
Pikeville			WEZJ	1440	1000	Franklin			KLIC	1230	1000	KRMD	1340	1000	Calais		
WLSI	900	5000	Winchester			KFRA	1390	500	KMLB	1440	5000	KWKH	1130	50000	WODY	1230	1000
WPKE	1240	1000	WWKY	1380	1000	Franklinton			KNOE	540	5000	Slidell			Caribou		

WFST	600	5000	WTVL	1490	1000	Glen Burnie			Attleboro			WCCM	800	1000	Springfield		
Dover Foxcroft			Westbrook			WJRO	1590	1000	WARA	1320	1000	Leominster			WHYN	560	5000
WDME	1340	1000	WJBQ	1440	5000	Hagerstown			Beverly			WLMS	1000	1000	WMAS	1450	1000
Ellsworth						WARK	1490	1000	WBVD	1570	500	Lowell			WSPR	1270	5000
WDEA	1370	5000	MARYLAND			WJEJ	1240	1000	Boston			WCAP	980	5000	Taunton		
Farmington			Aberdeen			Halfway			WBZ	1030	50000	WLLH	1400	1000	WPEP	1570	1000
WKTJ	1380	1000	WAMD	970	500	WHAG	1410	1000	WEEI	590	5000	Lynn			Waltham		
Ft. Kent			Annapolis			Havre De Grace			WEZE	1260	5000	WLYN	1360	1000	WDLW	1330	5000
WLVC	1340	250	WANN	1190	10000	WASA	1330	5000	WHDH	850	50000	Marlboro			Ware		
Gardiner			WNAV	1430	5000	La Plata			WHUE	1150	5000	WSRO	1470	5000	WARE	1250	5000
WABK	1280	5000	WYRE	810	250	WSMD	1560	25000	WILD	1090	5000	Medford			Webster		
Gorham			Baltimore			Laurel			WITS	1510	50000	WXSX	1430	5000	WGKP	940	250
WDCI	1590	5000	WAYE	860	1000	WLMD	900	1000	WRKO	680	50000	Milford			West Springfield		
Houlton			WBAL	1090	50000	Leonardtown			WROL	950	5000	WMRC	1490	1000	WNUS	1490	1000
WHOU	1340	1000	WBMD	750	1000	WKIK	1370	1000	Brockton			Natick			West Yarmouth		
Lewiston			WCAO	600	5000	Lexington Park			WBET	1460	5000	WGTR	1060	50000	WSOX	1240	1000
WCOU	1240	1000	WCBM	680	10000	WPTX	920	5000	WOKW	1410	1000	New Bedford			Westfield		
WLAM	1470	5000	WEBB	1360	5000	Morningside			Brookline			WBSM	1420	5000	WLDM	1570	2500
Lincoln			WFBR	1300	5000	WPGC	1580	50000	WUNR	1600	5000	WNBH	1340	1000	Worcester		
WLKN	1450	1000	WITH	1230	1000	Oakland			Cambridge			Newburyport			WFTQ	1440	5000
Machias			WSID	1010	1000	WMSG	1050	500	WCAS	740	250	WNBP	1470	500	WNEB	1230	1000
WMCS	1400	1000	WWIN	1400	1000	Ocean City			Chicopee			Newton			WORC	1310	5000
Madawaska			Bel Air			WETT	1590	1000	WACE	730	5000	WNTN	1550	10000	WTAG	580	5000
WSJR	1230	1000	WVOB	1520	250	Pocomoke City			E. Longmeadow			Norfolk			MICHIGAN		
Millinocket			Brunswick			WDMV	540	500	WIXY	1600	5000	WJMQ	1170	1000	Adrian		
WMKR	1240	1000	WTRI	1520	500	Rockville			Fall River			North Adams			WABJ	1490	1000
Portland			Cabin John			WINX	1600	1000	WALE	1400	1000	WMNB	1230	1000	Albion		
WCSH	970	5000	WCTN	950	1000	Salisbury			WSAR	1480	5000	Northampton			WALM	1260	1000
WGAN	560	5000	Cambridge			WBOC	960	5000	Fitchburg			WHMP	1400	1000	Alma		
WLOB	1310	5000	WCEM	1240	1000	WICO	1320	1000	WEIM	1280	5000	Orange			WFYC	1280	1000
WPOR	1490	1000	Chesterstown			WJDY	1470	5000	WFGL	960	1000	WCAT	1390	1000	Alpena		
Presque Isle			WCTR	1530	250	Silver Spring			Framingham			Orleans			WATZ	1450	1000
WAGM	950	5000	Cumberland			WGAY	1050	1000	WKOX	1190	1000	WKZE	1170	1000	Ann Arbor		
WEGP	1390	5000	WCBC	1270	5000	Thurmont			Gardner			Pittsfield			WAAM	1600	5000
Rockland			WCMD	1230	1000	WTHU	1450	500	WGAW	1340	1000	WBC	1420	1000	WPAG	1050	5000
WRKD	1450	1000	WTBO	1450	1000	Towson			Great Barrington			WBRK	1340	1000	Bad Axe		
Rumford			Easton			WTOW	1570	5000	WSBS	860	250	WUHN	1110	1000	WLEW	1340	1000
WRUM	790	1000	WEMD	1460	1000	Westminster			Greenfield			Plymouth			Battle Creek		
Sanford			Elkton			WTTR	1470	1000	WHAI	1240	1000	WPLM	1390	5000	WBCK	930	5000
WSME	1220	1000	WSER	1550	1000	Wheaton			WPOE	1520	10000	Quincy			WKNR	1400	1000
Skowhegan			Frederick			WDON	1540	5000	Haverhill			WJDA	1300	1000	WWKQ	1500	1000
WQMR	1150	5000	WFMD	930	5000	MASSACHUSETTS			WHAV	1490	1000	Salem			Bay City		
South Paris			WZYQ	1370	500	Amherst			Holyoke			WESX	1230	1000	WBCM	1440	5000
WXIV	1450	1000	Frostburg			WTTT	1430	5000	WREB	930	500	Southbridge			WXOX	1250	1000
Waterville			WFRB	560	5000				Lawrence			WESO	970	1000			

Benton Harbor			Fremont			WUPY	970	5000	Munising			WIDG	940	5000	KBMO	1290	500
WHFB	1060	5000	WSHN	1550	1000	Jackson			WQXO	1400	1000	St. Johns			Blue Earth		
Big Rapids			Gaylord			WJDJ	1510	5000	Muskegon			WRBJ	1580	1000	KBEB	1560	1000
WBRN	1460	1000	WATC	900	1000	WKHM	970	1000	WKBB	850	1000	St. Joseph			Brainerd		
Cadillac			Gladwin			WXCM	1450	1000	WMUS	1090	1000	WSJM	1400	1000	KLIZ	1380	5000
WATT	1240	1000	WJEB	1350	1000	Kalamazoo			WTRU	1600	5000	St. Louis			KVBR	1340	1000
WWAM	1370	5000	Grand Haven			WKMI	1360	5000	Muskegon Heights			WMLM	1540	1000	Breckenridge		
Caro			WGHN	1370	500	WKPR	1420	1000	WKJR	1520	10000	Sturgis			KBMW	1450	1000
WKYO	1360	1000	Grand Rapids			WKZO	590	5000	Newberry			WSTR	1230	1000	Buffalo		
Charlevoix			WCUZ	1230	1000	WYYY	1470	500	WNBY	1450	1000	Tawas City			KWC	1360	500
WVOY	1270	5000	WFUR	1570	1000	Kalkaska			Niles			WIOS	1480	1000	Cloquet		
Charlotte			WGRD	1410	1000	WTGE	1420	500	WNIL	1290	500	Three Rivers			WKLK	1230	1000
WGUY	1390	5000	WMAX	1480	5000	Kentwood			Otsego			WLKM	1510	500	Crookston		
Cheboygan			WOOD	1300	5000	WKWM	1140	5000	WAOP	980	1000	Traverse City			KROX	1260	1000
WCBY	1240	1000	Grayling			Lansing			Owosso			WCCW	1310	5000	Detroit Lakes		
Clare			WGRY	1590	1000	WILS	1320	5000	WOAP	1080	1000	WTCM	1400	1000	KDLM	1340	1000
WRNN	990	250	Greenville			WITL	1010	500	Petoskey			WTCM	580	2500	Duluth		
Coldwater			WPLB	1380	1000	WJIM	1240	1000	WJML	1110	10000	West Branch			KDAL	610	5000
WTVB	1590	5000	Hancock			Lapeer			WWPZ	1340	1000	WBMB	1060	1000	KQDS	1390	500
Dearborn			WMPL	920	1000	WDEY	1530	5000	Pontiac			Whitehall			WEBC	560	5000
WNIC	1310	5000	Hastings			WMPC	1230	1000	WPON	1460	1000	WLRQ	1490	1000	WWJC	850	10000
Detroit			WBCH	1220	250	Livonia			Port Huron			Wyoming			East Grand Forks		
WCXI	1130	50000	Hillsdale			WCAR	1090	250	WHLS	1450	1000	WYGR	1530	500	KRAD	1590	5000
WJLB	1400	1000	WCSR	1340	500	Ludington			WPHM	1380	5000	Ypsilanti			Ely		
WJR	760	50000	Holland			WKLA	1450	1000	Portage			WSDS	1480	500	WELY	1450	1000
WLQV	1500	50000	WHTC	1450	1000	Manistee			WBUK	1560	2500	WYFC	1520	250	Eveleth		
WWJ	950	5000	WJBL	1260	5000	WMTE	1340	1000	Rockford						WEVE	1340	1000
WXYZ	1270	5000	Houghton			Manistique			WJPW	810	500				Fairmont		
Dimondale			WTIQ	1490	1000	Marine City			Rogers City						KSUM	1370	1000
WDTB	1170	1000	Houghton Lake			WSMA	1590	1000	WHAK	960	5000				Faribault		
Dowagiac			WHGR	1290	5000	Marquette			Royal Oak			Albany			KDHL	920	5000
WDOW	1440	1000	Howell			WDMJ	1320	5000	WEXL	1340	1000	KASM	1150	1000	Fergus Falls		
East Lansing			WHMI	1350	500	Mason			Saginaw			Albert Lea			KBRF	1250	5000
WKAR	870	10000	Inkster			WUNN	1110	1000	WKNX	1210	10000	KATE	1450	1000	Fosston		
WVIC	730	500	WCHB	1440	1000	Menominee			WSAM	1400	1000	Alexandria			KEHG	1480	5000
Escanaba			Ionia			WAGN	1340	1000	WSGW	790	5000	KXRA	1490	1000	Golden Valley		
WBDN	600	1000	WION	1430	5000	Midland			Saline			Anoka			KQRS	1440	5000
WBDC	680	10000	Iron Mountain			WMPX	1490	1000	WNRS	1290	500	KTWN	1470	1000	KUXL	1570	2500
Flint			WMIQ	1450	1000	Monroe			Sandusky			Austin			Grand Rapids		
WAMM	1420	500	Iron River			WHND	560	500	WMIC	1560	1000	KAUS	1480	1000	KOZY	1320	5000
WDFD	910	5000	WIKB	1230	1000	Mt. Clemens			Sault Ste. Marie			KQAQ	970	5000	Hastings		
WKMF	1470	5000	Ironwood			WBRB	1430	500	WSOO	1230	1000	Bemidji			KDWA	1460	1000
WLQB	1570	1000	WJMS	590	5000	Mt. Pleasant			South Haven			KBUN	1450	1000	Hibbing		
WTAC	600	1000	Ishpeming			WCEN	1150	1000	WJOR	940	1000	KKBJ	1360	5000	WKKQ	1060	5000
WTRX	1330	5000	WJPD	1240	1000				St. Ignace			Benson			WMFG	1240	1000

Hutchinson			Owatonna			Virginia			WJMB	1340	1000	WFOR	1400	1000	WDAL	1330	5000
KDUZ	1260	1000	KRFO	1390	500	WHLB	1400	1000	Calhoun City			WHSY	1230	1000	WFEZ	1390	5000
International Falls			Park Rapids			Wabasha			WJRL	1530	250	WORV	1580	1000	WMOX	1010	10000
KGHS	1230	500	KPRM	1270	5000	KWMB	1190	1000	Canton			WXXX	1310	1000	WOKK	910	5000
Jackson			KPRM	1240	1000	Wadena			WMGO	1370	1000	Hazlehurst			WOIC	1450	1000
KKOJ	1190	5000	Pine City			KWAD	920	1000	Carthage			WMDC	1220	250	Monticello		
Litchfield			WCMP	1350	1000	Waite Park			WECF	1080	5000	Holly Springs			WMLC	1270	1000
KLFD	1410	500	Pipestone			KKCM	1390	2500	Centerville			WKRA	1110	1000	Moss Point		
Little Falls			KLOH	1050	1000	Walker			WSSL	1580	250	Houston			WCIS	1460	500
KLTF	960	5000	Preston			KLLR	1600	500	Clarksdale			WCPC	940	50000	Natchez		
Long Prairie			KFIL	1060	1000	Waseca			WROX	1450	1000	Indianola			WMIS	1240	1000
KEYL	1400	1000	Princeton			KOWO	1170	1000	Cleveland			WNLA	1380	500	WNAT	1450	1000
Luverne			WQPM	1300	1000	Willmar			WCLD	1490	1000	Iuka			New Albany		
KQAD	800	500	Red Wing			KWLM	1340	1000	WRDC	1410	1000	WVOM	1270	1000	WNAU	1470	500
Mankato			KCUE	1250	1000	Windom			Columbia			Jackson			Newton		
KTOE	1420	5000	Redwood Falls			KDOM	1580	250	WCJU	1450	1000	WCCCL	1590	5000	WMYQ	1410	500
KYSM	1230	1000	KLGR	1490	1000	Winona			WFFF	1360	1000	WJDX	620	5000	Oxford		
Maplewood			Rochester			KAGE	1380	1000	Columbus			WJQS	1400	1000	WSUH	1420	1000
WMIN	1010	250	KOLM	1520	10000	KWNO	1230	1000	WACR	1050	1000	WJXN	1450	1000	Pascagoula		
Marshall			KROC	1340	1000	Worthington			WCBI	550	1000	WKXI	1300	5000	WPMP	1580	5000
KMHL	1400	1000	KWEB	1270	5000	KWOA	730	1000	WMBC	1400	1000	WOKJ	1550	50000	Philadelphia		
Minneapolis			Roseau			MISSISSIPPI			Corinth			WSLI	930	5000	WHOC	1490	1000
KSJN	1330	5000	KRWB	1410	1000	Aberdeen			WCMA	1230	1000	Kosciusko			Picayune		
KTCR	690	500	Sauk Rapids			WMPA			WKCU	1350	1000	WKOZ	1340	1000	WRJW	1320	5000
KTIS	900	2500	WVAL	800	2500	Amory			Eupora			Laurel			Pontotoc		
KUOM	770	1000	Shakopee			WAMY	1580	5000	WEPA	710	2500	WAML	1340	1000	WSEL	1440	1000
WAYL	980	5000	KSMM	1530	500	WZBR	1520	500	Forest			WLAU	1430	5000	Poplarville		
WCCO	830	50000	South St. Paul			Batesville			WMAG	850	10000	WQIS	1260	5000	WRPM	1530	10000
WDGY	1130	50000	KDAN	1370	500	Bay Springs			Fulton			Leland			Port Gibson		
WWTC	1280	5000	St. Cloud			WHLE	1290	1000	WFTO	1330	2500	WESY	1580	1000	WCSP	1520	250
Montevideo			KCLD	1450	1000	Bay St. Louis			Greenville			Lexington			WKPG	1320	500
KDMA	1460	1000	WJON	1240	1000	WHIL	1570	1000	WDDT	900	1000	WXTN	1000	5000	Prentiss		
Moorhead			St. Louis Park			WGVM			WNIX	1260	5000	Louisville			WKPO	1510	1000
KVOX	1280	5000	KRSI	950	1000	WXGR	1190	5000	Greenwood			WLSM	1270	5000	Quitman		
Morris			St. Paul			Belzoni			WABG	960	1000	Lucedale			WBFN	1500	1000
KMRS	1230	1000	KDWB	630	5000	WELZ	1460	1000	WGRM	1240	1000	WRBE	1440	5000	Ripley		
New Prague			KEEY	1400	1000	Biloxi			Grenada			Magee			WCSA	1260	500
KCHK	1350	500	KSTP	1500	50000	WLOX	1490	1000	WNAG	1400	1000	WSJC	810	50000	Senatobia		
New Ulm			St. Peter			WVMI	570	5000	Gulfport			Marks			WSAO	1550	5000
KNUJ	860	1000	KRBI	1310	1000	Booneville			WGCM	1240	1000	WQMA	1520	250	Starkville		
Northfield			Stillwater			WBIP	1400	1000	WGUF	1130	500	Mc Comb			WKOR	980	1000
KVMN	1080	1000	WAVN	1220	5000	Brandon			WROA	1390	5000	WAPP	980	5000	WSSO	1230	1000
WCAL	770	5000	Thief River Falls			WRKN	970	1000	Hattiesburg			WHNY	1250	5000	Tupelo		
Ortonville			KKAQ	1460	500	Brookhaven			WBKH	950	5000	Meridian			WELO	580	1000
KDIO	1350	1000	KTRF	1230	1000	WCHJ	1470	1000							WJLJ	1060	250

WTUP	1490	1000	Carthage			KCCV	1510	1000	KWIX	1230	1000	KUSN	1270	1000	KBMN	1230	1000
Tylertown			KDMO	1490	1000	Ironton			Monett			St. Louis			KBOZ	1090	5000
WTVL	1290	1000	Caruthersville			KPIA	1480	5000	KRMO	990	250	KATZ	1600	5000	KXXL	1450	1000
Vicksburg			KCRV	1370	1000	Jackson			Mountain Grove			KMOX	1120	50000	Butte		
WJFL	1490	1000	Cherleston			KJAS	1170	250	KLRS	1360	1000	KSD	550	5000	KBOW	550	5000
WQBC	1420	1000	KCHR	1350	1000	Jefferson City			Neosho			KSTL	690	1000	KXLF	1370	5000
Water Valley			Chillicothe			KLK	950	5000	KBTN	1420	500	KWK	1380	5000	Deer Lodge		
WVLY	1320	500	KCHI	1010	250	KWOS	1240	1000	Nevada			KXEN	1010	50000	KDRG	1400	1000
Waynesboro			Clayton			Joplin			KNEM	1240	1000	KXOK	630	5000	Dillon		
WABO	990	1000	KADI	1320	5000	KFSB	1310	5000	Osage Beach			WEW	770	1000	KDBM	1490	1000
West Point			KFUO	850	5000	KODE	1230	1000	KRMS	1150	1000	WIL	1430	5000	Glasgow		
WROB	1450	1000	Clinton			KQVX	1560	10000	Piedmont			Sullivan			KLTZ	1240	1000
Wiggins			KDKD	1280	1000	WMBH	1450	1000	KPWB	1140	1000	KTUI	1560	1000	Glendive		
WIGG	1420	1000	Columbia			Kansas City			Poplar Bluff			Thayer			KGLE	590	500
Winona			KFRU	1400	1000	KCMO	810	50000	KLID	1340	1000	KALM	1290	1000	KXGN	1400	1000
WONA	1570	1000	KTGR	1580	250	KJLA	1190	1000	KWOC	930	5000	Trenton			Great Falls		
Yazoo City			Cuba			KMBZ	980	5000	Portageville			KTTN	1600	500	KARR	1400	1000
WAZF	1230	1000	KBCC	1410	1000	KPRT	1590	1000	KMIS	1050	1000	Union			KEIN	1310	5000
WYAZ	1530	250	De Soto			WDAF	610	5000	Potosi			KLPW	1220	1000	KON	560	5000
			KHAD	1190	5000	WHB	710	10000	KYRO	1280	500	Warrensburg			KQDI	1450	1000
MISSOURI			Dexter			Kennett			Rolla			KOKO	1450	1000	Hamilton		
Aurora			KDEX	1590	10000	KBOA	830	1000	KCLU	1590	1000	Warrenton			KLYQ	1240	1000
KSWM	940	500	Doniphan			KBXM	1540	1000	KTTR	1490	1000	KWRE	730	1000	Hardin		
Ava			KDFN	1500	1000	Kirkville			Salem			Waynesville			KHDN	1230	1000
KSOA	1430	500	East Prairie			KIRX	1450	1000	KSMO	1340	1000	KFBD	1270	500	Havre		
Bolivar			KYMO	1080	500	Lebanon			Sedalia			KJPW	1390	1000	KOJM	610	1000
KYOO	1130	250	El Dorado Springs			KJEL	1080	250	KDRO	1490	1000	West Plains			Helena		
Boonville			KESM	1580	500	KLWT	1230	1000	KSIS	1050	1000	KWPM	1450	1000	KBLL	1240	1000
KWRT	1370	1000	Excelsior Springs			Lexington			Sikeston			Willow Springs			KCAP	1340	1000
Bowling Green			KEXS	1090	250	KLEX	1570	250	KMPL	1520	5000	KUKU	1330	1000	KMTX	950	5000
KPCR	1530	1000	Farmington			Liberty			KSIM	1400	1000				Kalispell		
Branson			KREI	800	1000	KFIX	1140	500	Southwest City			MONTANA			KGEZ	600	5000
KBHM	1220	1000	Festus			Macon			KCTE	1140	250	Anaconda			KOFI	1180	10000
Brookfield			KJCF	1400	1000	KLTI	1560	250	Springfield			KANA	580	1000	Laurel		
KGHM	1470	500	Flat River			Malden			KBUG	1060	500	Baker			KLYC	1490	1000
Butler			KFMO	1240	1000	KTCB	1470	1000	KGBX	1260	5000	KFLN	960	5000	Lewistown		
KMAM	1530	500	Fredericktown			Marshall			KICK	1340	1000	Belegrade			KXLO	1230	1000
Cameron			KFTW	1450	1000	KMMO	1300	1000	KLFJ	1550	500	KGVW	630	1000	Libby		
KMRN	1360	500	Fulton			Marshfield			KTTS	1400	1000	Billings			KLCB	1230	1000
Cape Girardeau			KFAL	900	1000	KOSC	1510	250	KWTO	560	5000	KBMV	1240	1000	Livingston		
KGIR	960	5000	Hannibal			Maryville			St. Charles			KGHL	790	5000	KPRK	1340	1000
KGMO	1550	5000	KHMO	1070	5000	KNIM	1580	250	KIRL	1460	5000	KOOK	970	5000	Miles City		
KZYM	1220	250	Houston			Mexico			St. Joseph			KOYN	910	1000	KATL	1340	1000
Carrollton			KBTC	1250	1000	KXEO	1340	1000	KFEQ	680	5000	KURL	730	500	KIKC	1250	5000
KAOL	1430	500	Independence			Moberly			KKJO	1550	5000	Bozeman			Missoula		

KGRZ	1450	1000	KHUB	1340	500	Plattsburgh			KOLO	920	5000	WBBX	1380	1000	Newark		
KGVO	1290	5000	Grand Island			KOTD	1000	250	KONE	1450	1000	WHEB	750	1000	WNJR	1430	5000
KYLT	1340	1000	KMMJ	750	10000	Scottsbluff			Sparks			Rochester			WVNH	620	5000
KYSS	930	500	KRGI	1430	5000	KNEB	960	1000	KROI	1270	1000	WWNH	930	5000	Newton		
Plentywood			Hastings			KOLT	1320	5000	Winnemucca			Salem			WNNJ	1360	1000
KATQ	1070	5000	KHAS	1230	1000	Sidney			KWNA	1400	1000	WVNH	1110	5000	Ocean City		
Polson			KICS	1550	500	KSID	1340	1000				Wolfeboro			WIBG	1520	1000
KERR	1070	50000	Holdege			Superior			NEW HAMPSHIRE			WASR	1420	5000	Parsippany		
Red Lodge			KUVR	1380	500	KRFS	1600	500	Claremont						WBIO	1310	1000
KRBN	1450	1000	Kearney			Terrytown			WTSV	1230	1000	NEW JERSEY			Paterson		
Shelby			KGFW	1340	1000	KEYR	690	1000	Concord			Asbury Park			WPAT	930	5000
KRBN	1450	1000	KRNY	1460	5000	Valentine			WKXL	1450	1000	WJLK	1310	2500	Plainfield		
Shelby			Kimball			KVSH	940	5000	Conway			Atlantic City			WERA	1590	500
KSEN	1150	5000	KIMB	1260	1000	Wayne			WBNC	1050	1000	WIIN	1450	1000	Pleasantville		
Sidney			Lexington			KTCH	1590	2500	Dover			WMID	1340	1000	WOND	1400	1000
KGCX	1480	5000	KRVN	880	50000	York			WTSN	1270	5000	WUSS	1490	1000	Pompton Lakes		
West Yellowstone			Lincoln			KAWL	1370	500	Exeter			Bridgeton			WKER	1500	1000
KWYS	920	1000	KECK	1530	5000				WKXR	1540	1000	WSNJ	1240	1000	Princeton		
Whitefish			KFOR	1240	1000	NEVADA			Franklin			Camden			WHWH	1350	5000
KJJR	1400	1000	KLIN	1400	1000	Carson City			WFTN	1240	500	WSSJ	1310	1000	Salem		
KTTX	1450	1000	KLMS	1480	5000	KPTL	1300	5000	Hanover			WTMR	800	5000	WJIC	1510	2500
Wolf Point			Mc Cook			Elko			WDCR	1340	1000	Dover			Somerville		
KVCK	1450	1000	KBRL	1300	5000	KELK	1240	1000	WTSL	1400	1000	WRAN	1510	10000	WBRW	1170	500
			KICX	1360	1000	Ely			Keene			Eatontown			Stirling		
NEBRASKA			Nebraska City			KELY	1230	250	WKBK	1220	1000	WHTG	1410	500	WKMB	1070	2500
Ainsworth			KNCY	1600	500	Fallon			WKNE	1290	5000	Elizabeth			Trenton		
KBRB	1400	1000	Norfolk			KVLV	980	5000	Laconia			WJDM	1530	500	WKXW	1260	5000
Alliance			WJAG	780	1000	Henderson			WEMJ	1490	1000	Ewing			WTTM	920	1000
KCOW	1400	1000	North Platte			KVOV	1280	5000	WLNH	1350	5000	WIMG	1300	5000	Vineland		
Beatrice			KAHL	1410	5000	Las Vegas			Littleton			Hackensack			WDVL	1270	500
KWBE	1450	1000	KJLT	970	5000	KDWN	720	50000	WLTN	1400	1000	WWDJ	970	5000	WWBZ	1360	1000
Broken Bow			KODY	1240	1000	KENO	1460	5000	Manchester			Hackettstown			Washington		
KCNI	1280	1000	O'Neil			KLAV	1230	1000	WFEA	1370	5000	WRNJ	1000	1000	WCRV	1580	1000
Chadron			KBRX	1350	1000	KNUU	970	500	WGIR	610	5000	Hammonton			Wildwood		
KCSR	610	1000	Ogallala			KORK	920	5000	WKBR	1250	5000	WRDI	1580	1000	WCMC	1230	1000
Columbus			KOGA	930	500	KRAM	1340	1000	Nashua			Lakewood			Zaephath		
KJSK	900	1000	Omaha			KVEG	1400	1000	WOTW	900	1000	WHLW	1170	5000	WAWZ	1380	5000
KTTT	1510	1000	KCRO	660	1000	North Las Vegas			WSMN	1590	5000	Millville					
Cozad			KFAB	1110	50000	KMJJ	1140	10000	Newport			WREY	1440	1000	NEW MEXICO		
KAMI	1580	1000	KOIL	1290	5000	Reno			WCNL	1010	250	Morristown			Alamogordo		
Fairbury			KOOO	1420	1000	KBET	1340	1000	Peterborough			WMTR	1250	5000	KINN	1270	1000
KGMT	1310	500	KYNN	1490	1000	KCBN	1230	1000	WSCV	1050	1000	Mount Holly			KPSA	1230	1000
Falls City			WOW	590	5000	KCRL	780	50000	Plymouth			WJJZ	1460	5000	Albuquerque		
KTNC	1230	500	Ord			KOBY	1550	10000	WPNH	1300	5000	New Brunswick			KABQ	1350	5000
Fremont			KNLV	1060	1000	KOH	630	5000	Portsmouth			WCTC	1450	1000	KAMX	1520	1000

KDAZ	730	1000	KWEW	1480	5000	WOKO	1460	5000	WECK	1230	1000	WHHO	1320	5000	WVIP	1310	5000
KDQO	1150	5000	Humble City			WPTR	1540	50000	Corning			WLEA	1480	2500	New City		
KKIM	1000	10000	KCIA	1110	1000	WROW	590	5000	WCBA	1350	1000	Horseheads			WRKL	910	1000
KOB	770	50000	Las Cruces			Amherst			WCLI	1450	1000	WIQT	1000	5000	New roche		
KQEO	920	1000	KGRT	570	5000	WUFO	1080	1000	Cornwall			Hudson			WVOX	1460	500
KRKE	610	5000	KOBE	1450	1000	Amsterdam			WWLE	1170	1000	WHUC	1230	1000	New York		
KRZY	1090	50000	Las Vegas			WCSS	1490	1000	Cortland			Huntington			WABC	770	50000
KRZY	1450	1000	KFUN	1230	250	WKOL	1570	1000	WKRT	920	1000	WGSN	740	25000	WADO	1280	5000
KKKS	1190	1000	KNMX	540	5000	Auburn			Dansville			Hyde Park			WBNX	1380	5000
KZIA	1580	10000	Los Alamos			WAUB	1590	500	WDNY	1600	500	WWWI	950	500	WCBS	880	50000
Artesia			KRSN	1490	1000	WMBO	1340	1000	Dundee			Islip			WEVD	1330	5000
KSPV	990	1000	Lovington			Babylon			WFLR	1570	1000	WLIX	540	250	WHN	1050	50000
Aztec			KLEA	630	500	WGLI	1290	5000	Dunkirk			Ithaca			WINS	1010	50000
KKBK	1340	1000	Portales			WNYG	1440	1000	WDOE	1410	1000	WHCU	870	5000	WJIT	1480	5000
Bayard			KENM	1450	1000	Baldwinsville			East Syracuse			WTKO	1470	5000	WLBI	1190	10000
KNFT	950	5000	Rton			WSEN	1050	1000	WYRD	1540	1000	Jamestown			WMCA	570	5000
Belen			KRTN	1490	1000	Batavia			Ellenville			WJTN	1240	500	WNBC	660	50000
KARS	860	250	Roswell			WBTA	1490	500	WELV	1370	5000	WKSJ	1340	250	WNEW	1130	50000
Carlsbad			KBCQ	1020	50000	Bath			Elmira			Johnstown			WNYC	830	50000
KAMQ	1240	1000	KBIM	910	5000	WVIN	1380	500	WELM	1410	1000	WIZR	930	1000	WOR	710	50000
KBAD	740	1000	KCRX	1430	5000	Beacon			WENY	1230	1000	Kingston			WPOW	1330	5000
KCCC	930	1000	KRDD	1320	1000	WBNR	1260	1000	Elmira Heights			WGHQ	920	5000	WQXR	1560	50000
Clayton			KRSY	1230	1000	Binghamton			WEHH	1590	500	WKNY	1490	1000	WWRL	1600	5000
KLMX	1450	1000	Ruidoso			WINR	680	1000	Endicott			Lake Placid			Newark		
Clovis			KRRR	1360	5000	WKOP	1360	5000	WENE	1430	5000	WIRD	920	5000	WACK	1420	500
KCLV	1240	1000	Santa Fe			WNBK	1290	5000	Fredonia			Lancaster			Newburgh		
KICA	980	1000	KAFE	810	5000	Boonville			WBUZ	1570	250	WXRL	1300	1000	WGNV	1220	5000
KWKA	680	500	KTRC	1400	1000	WBRV	900	1000	Freepoint			Liberty			Niagara Falls		
Corrales			KVSF	1260	5000	Brewster			WGBB	1240	1000	WVOS	1240	1000	WHLA	1270	5000
KXAK	1310	1000	Santa Rosa			WPUT	1510	1000	Fulton			Little Falls			WJL	1440	1000
Deming			KSIX	1420	1000	Brockport			WOSC	1300	1000	WLFH	1230	1000	North Syracuse		
KOTS	1230	1000	Silver City			WJBT	1590	1000	Geneva			Lockport			WSOQ	1220	1000
Espanol			KSIL	1340	1000	WJBT	1560	1000	WGVA	1240	1000	WLVL	1340	1000	Norwich		
KDCE	970	1000	Socorro			Buffalo			Glens Falls			Malone			WCHN	970	1000
Farmington			KSRC	1290	1000	WBEN	930	5000	WBZA	1410	1000	WICY	1490	1000	Ogdensburg		
KENN	1390	5000	Taos			WEBR	970	5000	WWSC	1450	1000	Massena			WSLB	1400	1000
KNDN	960	5000	KKIT	1340	1000	WGR	550	5000	Gloversville			WMSA	1340	1000	Olean		
KRZE	1280	5000	Truth Or Consequences			WKBW	1520	50000	WENT	1340	1000	WBYG	1050	1000	WHDL	1450	1000
Gallup			KCHS	1400	250	WWOL	1120	1000	Gouverneur			Mechanicville			WMNS	1360	1000
KGAK	1330	5000	Tucumcari			WYSL	1400	1000	Hempstead			WMI	1170	250	Oneida		
KYVA	1230	1000	KTNM	1400	1000	Canandaigua			WHLI	1100	10000	Middletown			WCR	1600	1000
Grants						WCGR	1550	250	Herkimer			WALL	1340	1000	Oneonta		
KMIN	980	1000	NEW YORK			Catskill			WRMV	1420	1000	Mineola			WDOS	730	1000
Hobbs			Albany			WCKL	560	1000	Hornell			WTHE	1520	1000	Oswego		
KHOB	1390	5000	WABY	1400	1000	Cheektowaga						Mount Kisco			WSGO	1440	1000

Owego			Schenectady			WZKY	1580	250	WBT	1110	5000	WGHB	1250	5000	WHKP	1450	1000
WEBO	1330	5000	WGY	810	50000	Ashboro			WGIV	1600	2500	Fayetteville			WHVL	1600	5000
Patchogue			WWWD	1240	1000	WZOO	710	1000	WHVN	1310	1000	WFAI	1230	1000	Hickory		
WALK	1370	500	Seneca Falls			Asheboro			WIST	1240	1000	WFLB	1490	1000	WHKY	1290	5000
WYFA	1580	10000	WSFW	1110	1000	WGWR	1260	5000	WQCC	1540	10000	WFNC	940	50000	WIRC	630	1000
Peekskill			Spring Valley			Asheville			WSOC	930	5000	WIDU	1600	1000	WSPF	1000	5000
WLNA	1420	5000	WGRC	1300	500	WISE	1310	5000	Cherryville			Forest City			High Point		
Plattsburgh			Syracuse			WRAQ	1380	5000	WCSL	1590	1000	WAGY	1320	1000	WGOS	1070	1000
WEAV	960	5000	WFBL	1390	5000	WSKY	1230	1000	China Grove			WBBO	780	1000	WMFR	1230	1000
WIRY	1340	1000	WHEN	620	5000	WWNC	570	5000	WRNA	1140	250	Franklin			WOKX	1590	1000
WKDR	1070	5000	WNDR	1260	5000	Beaufort			Clayton			WFSC	1050	1000	Icard Township		
Port Jervis			WOLF	1490	1000	WBMA	1400	1000	WHPY	1590	5000	WLTM	1480	5000	WUIV	1580	5000
WDLC	1490	1000	WSYR	570	5000	Belmont			Clinton			Fuquay Springs			Jacksonville		
Potsdam			Ticonderoga			WCGC	1270	1000	WCLN	1170	1000	WAKS	1460	5000	WIIZ	1290	1000
WPDM	1470	1000	WIPS	1250	1000	Benson			WRRZ	880	1000	Garner			WJNC	1240	1000
Poughkeepsie			Troy			WPYB	1130	1000	Concord			WKBQ	1000	1000	WLAS	910	5000
WEOK	1390	5000	WHAZ	1330	1000	Black Mountain			WEGO	1410	1000	Gastonia			Kannapolis		
WKIP	1450	1000	WTRY	980	5000	WBMS	1350	500	Dallas			WGNC	1450	1000	WGTL	870	1000
Remsen			Utica			WFGW	1010	50000	WAAK	960	1000	WLTC	1370	5000	WRKB	1460	500
WADR	1480	5000	WIBX	950	5000	Boone			Dobson			Goldsboro			King		
Rensselaer			WRUN	1150	5000	WATA	1450	1000	WYZD	1560	1000	WFMC	730	1000	WKTE	1090	1000
WQBK	1300	5000	WTLB	1310	1000	Brevard			Dunn			WGBR	1150	5000	Kings Mountain		
Riverhead			WUTQ	1550	1000	WPNF	1240	1000	WCKB	780	1000	WYNG	1300	1000	WKMT	1220	1000
WRCN	1570	1000	Walton			Bryson City			Durham			Graham			Kinston		
WRIV	1390	1000	WDLA	1270	5000	WBHN	1590	500	WDNC	620	5000	WSML	1190	1000	WELS	1010	1000
Rochester			Warsaw			Burgaw			WDUR	1490	1000	Granite Falls			WFTC	960	5000
WBBF	950	1000	WCJW	1140	1000	WBBS	1470	1000	WSRC	1410	5000	WKJK	900	250	WISP	1230	1000
WHAM	1180	50000	Warwick			Burlington			WTKI	1310	5000	Greensboro			Laurinburg		
WNYR	680	250	WTBQ	1110	250	WBBB	920	5000	Eden			WBIG	1470	5000	WEWO	1460	5000
WPXN	1280	5000	Watertown			WQRB	1150	1000	WCBX	1130	1000	WCOG	1320	5000	WEWO	1080	5000
WSAY	1370	5000	WATN	1240	1000	WKYK	940	1000	WLOE	1490	1000	WEAL	1510	1000	WLNC	1300	500
WWWG	1460	5000	WOTT	1410	5000	Camp Lejeune			Edenton			WGBG	1400	1000	Lenoir		
Rome			WTNY	790	1000	WJIK	1580	10000	WCDJ	1260	1000	WPET	950	500	WJRI	1340	1000
WKAL	1450	1000	Watkins Glen			Canton			Elizabeth City			Greenville			WKGX	1080	5000
WRNY	1350	500	WGMF	1500	250	WPTL	920	500	WCNC	1240	1000	WBZQ	1550	1000	Lexington		
Sag Harbor			Wellsville			WWIT	970	5000	WGAI	560	1000	WNCT	1070	10000	WBUY	1440	5000
WLNG	1600	500	WLSV	790	1000	Chadbourne			Elizabethtown			WOOW	1340	1000	Lillington		
Salamanca			White Plains			WVOE	1590	1000	WBLA	1440	5000	Hamlet			WLLN	1370	2500
WGGO	1590	5000	WFAS	1230	1000	Chapel Hill			Elkin			WKDX	1250	1000	Lincolnton		
Sandy Creek						WCHL	1360	5000	WIFM	1540	1000	Havelock			WLON	1050	1000
WSCP	1070	2500	NORTH CAROLINA			WRBX	1530	10000	Fair Bluff			WCPO	1330	1000	Louisburg		
Saranac Lake			Ahoskie	970	1000	Charlotte			WWKO	1480	1000	Henderson			WYRN	1480	500
WNBZ	1240	1000	Albemarle			WAME	1480	5000	Fairmont			WHNC	890	1000	Lumberton		
Saratoga Springs			WWWX	1010	1000	WAYS	610	5000	WFMO	860	1000	WIZS	1450	1000	WAGR	580	500
WKAJ	900	500							Farmville			Hendersonville			WTSB	1340	1000

Marion			Raeeford			WNCA	1570	1000	Washington			KBMR	1130	10000	KTGO	1090	1000
WBRM	1250	1000	WSHB	1400	1000	Smithfield			WEEW	1320	500	KFYR	550	5000	Valley City		
Marshall			Raleigh			WMPM	1270	5000	WITN	930	5000	Bowman			KOVC	1490	1000
WMMH	1460	500	WKIX	850	10000	South Gastonia			Waynesville			KPOK	1340	1000	Williston		
Mayodan			WLLE	570	500	WGAS	1420	500	WHCC	1400	1000	Carrington			KEYZ	1360	5000
WMYN	1420	500	WPJL	1240	1000	Southern Pines			Weldon			KDAK	1600	500			
Mebane			WPTF	680	50000	WEEB	990	5000	WSMY	1400	1000	Devils Lake					
WHNI	1060	1000	WYNA	1550	1000	Sparta			West Jefferson			KDLR	1240	250			
Mocksville			Red Springs			WCOK	1060	250	WKSK	580	1000	Dickinson					
WDSL	1520	5000	WYRU	1510	1000	Spring Lake			Whiteville			KDIX	1230	1000			
Monroe			WYRU	1520	5000	WFBS	1450	1000	WENC	1220	5000	KLTC	1460	5000			
WIXE	1190	1000	Reidsville			Spruce Pine			WTXY	1540	1000	Fargo					
WMAP	1060	1000	WKXQ	1600	1000	WTOE	1470	1000	Wilkesboro			KFGO	790	5000			
Mooresville			WREV	1220	1000	St. Pauls			WWWC	1240	500	KFNW	1170	1000			
WHIP	1350	1000	Roanoke Rapids			WLAB	1060	250	Williamston			KQWB	1550	10000			
Morehead City			WCBT	1230	1000	Statesville			WIAM	900	1000	WDAY	970	5000			
WFTH	740	1000	Rockingham			WDRV	550	500	Wilmington			Grafton					
Morganton			WAYN	900	1000	WSIC	1400	1000	WGNL	1340	1000	KXPO	1340	1000			
WMNC	1430	5000	WLWL	1500	500	Sylva			WKLM	980	5000	Grand Forks					
Mt. Airy			Rocky Mount			WRGC	680	1000	WMFD	630	1000	KFJM	1370	1000			
WPAQ	740	10000	WCEC	810	1000	Tabor City			WWIL	1490	1000	KKXL	1440	1000			
WSYD	1300	5000	WEED	1390	5000	WTAB	1370	5000	Wilson			KNOX	1310	5000			
Mt. Olive			WGMT	1490	1000	Tarboro			WGTM	590	5000	Harvey					
WDJS	1430	1000	Rose Hill			WCPS	760	1000	WLLY	1350	1000	KHND	1540	500			
Murfreesboro			WEGG	710	250	Taylorsville			WVOT	1420	1000	Hettinger					
WWDR	1080	1000	Roxboro			WQXZ	860	250	Windsor			KNDC	1490	1000			
Murphy			WRXO	1430	1000	WTLK	1570	500	WBTE	990	1000	Jamestown					
WCVP	600	1000	Rutherfordton			Thomasville			Winston Salem			KQDJ	1400	1000			
WCRK	1320	5000	WCAB	590	500	WTNC	790	1000	WAAA	980	1000	KSJB	600	5000			
New Bern			Salisbury			Troy			WAIR	1340	1000	Langdon					
WBIC	1380	5000	WSAT	1280	1000	WJRM	1390	1000	WBFJ	1550	1000	KNDK	1080	1000			
WHIT	1450	1000	WSTP	1490	1000	Tryon			WSJS	600	5000	Mandan					
WRNB	1490	1000	Sanford			WTYN	1550	1000	WTOB	1380	5000	KBOM	1270	1000			
Newland			WEYE	1290	1000	Valdese			WURL	1500	10000	Mayville					
WJTP	1130	1000	WWGP	1050	1000	WSVM	1490	1000	Yadkinville			KMAV	1520	2500			
Newton			Scotland Neck			Wadesboro			WYDK	1480	1000	Minot					
WNNC	1230	1000	WYAL	1280	5000	WADE	1210	1000	Yanceyville			KCJB	910	5000			
North Wilkesboro			Selma			Wallace			WYNC	1540	250	KHRT	1320	2500			
WKBC	810	1000	WBZB	1090	1000	WLSE	1400	1000	Zebulon			KKOA	1390	5000			
Oxford			Shallotte			Wanchese			WETC	540	5000	KTYN	1430	5000			
WCBQ	1340	1000	WVCB	1410	500	WOBR	1530	250				Oakes					
Pinehurst			Shelby			Warrenton						KDDR	1220	1000			
WDLV	550	1000	WADA	1390	1000	WARR	1520	1000				Rugby					
Plymouth			WOHS	730	1000	Warsaw						KGCA	1450	1000			
WPNC	1470	5000	Siler City			WTRQ	1560	10000				Tioga					

Chillicothe			East Liverpool			WMOA	1490	1000	WTTF	1600	500	KWHW	1450	1000	KIHN	1340	1000
WBEX	1490	1000	WOHI	1490	1000	Marion			Toledo			Alva			Idabel		
WCHI	1350	1000	Eaton			WMRN	1490	1000	WCWA	1230	1000	KALV	1430	500	KBEL	1240	1000
Cincinnati			WCTM	1130	250	Massillon			WGOR	1520	1000	Anadarko			Lawton		
WCIN	1480	5000	Elyria			WTIG	990	250	WOHO	1470	1000	KRPT	850	500	KCCO	1050	250
WCKY	1530	50000	WEQL	930	1000	Middletown			WSPD	1370	5000	Ardmore			KSWO	1380	1000
WKRC	550	5000	Fairfield			WPFB	910	1000	WTOD	1560	5000	KVSO	1240	1000	Madill		
WLW	700	50000	WCNW	1560	5000	Mt. Vernon			Troy			Atoka			KMAD	1550	1000
WSAI	1360	5000	Findlay			WMVO	1300	500	WTRJ	1510	250	KEOR	1110	5000	Mc Alester		
WUBE	1230	1000	WFIN	1330	1000	Nelsonville			Uhrichville			Bartlesville			KNED	1150	1000
WZIP	1050	1000	Fostoria			WYNO	1130	250	WBTC	1540	250	KWON	1400	1000	KTMC	1400	250
Circleville			WFOB	1430	1000	New Boston			Van Wert			Blackwell			Miami		
WNRE	1540	1000	Fremont			WIOI	1010	1000	WERT	1220	250	KLTR	1580	1000	KGLC	910	1000
Cleveland			WFRO	900	500	Newark			Warren			Chickasha			Midwest City		
WABQ	1540	1000	Galion			WCLT	1430	500	WHHH	1440	5000	KWCO	1560	1000	KRMC	1220	250
WBBG	1260	5000	WGLX	1570	250	Niles			WTCL	1570	500	Claremore			Muskogee		
WERE	1300	5000	Gallipolis			WNIO	540	500	Washington Court House			KWPR	1270	1000	KBIX	1490	1000
WGAR	1220	50000	WJEH	990	1000	Norwalk			WCHO	1250	500	Clinton			KMUS	1380	1000
WHK	1420	5000	Hamilton			WLKR	1510	500	Waverly			KKCC	1320	1000	Norman		
WJW	850	10000	WMOH	1450	1000	Oberlin			WXIC	1380	1000	Cushing			KNOR	1400	1000
WWWEE	1100	50000	Heath			WOBL	1320	1000	Wellston			KUSH	1600	1000	KNAD	640	1000
Cleveland heights			WHTH	790	500	Paesville			WKOY	1330	500	Duncan			Oklahoma City		
WJMO	1490	1000	WHTH	1000	250	WPVL	1460	1000	Willoughby			KRHD	1350	250	KATT	1140	1000
Columbus			Hillsboro			Parma			WELW	1330	500	Durant			KBYE	890	1000
WBNS	1460	5000	WSRW	1590	500	WSUM	1000	500	Wilmington			KSEO	750	250	KOCY	1340	1000
WCOL	1230	1000	Ironton			Piqua			WKFI	1090	1000	El Reno			KOMA	1520	50000
WMNI	920	1000	WIRO	1230	1000	WPTW	1570	250	Wooster			KCAN	1460	500	KQCV	800	250
WOSU	820	5000	Jackson			Pomeroy			WWST	960	1000	Elk City			KTKO	1000	5000
WTVN	610	5000	WLMJ	1280	1000	WMPO	1390	5000	Worthington			KADS	1240	1000	WKY	930	5000
WVKO	1580	1000	Kent			Portsmouth			WRFD	880	5000	Enid			Okmulgee		
Conneaut			WKNT	1520	1000	WNXT	1260	5000	Xenia			KCRC	1390	1000	KOKL	1240	1000
WWOW	1360	500	Lancaster			WPAY	1400	1000	WELX	1110	250	KGWA	960	1000	Pauls Valley		
Coshocton			WHOK	1320	1000	Salem			WGIC	1500	500	Frederick			KOKL	1240	1000
WTNS	1560	1000	Lima			WSOM	600	500	Youngstown			KTAT	1570	250	Pawhuska		
Dayton			WCIT	940	250	Sandusky			WBBW	1240	1000	Guthrie			KXVQ	1500	5000
WAVI	1210	250	WIMA	1150	1000	WLEC	1450	1000	WFMJ	1390	5000	KOKC	1490	500	Ponca City		
WHIO	1290	5000	Logan			Sidney			WGFT	1500	500	Guymon			WBBZ	1230	1000
WING	1410	5000	WLGK	1510	1000	WMBR	1080	250	WGBN	570	5000	KGYN	1210	10000	Poteau		
WONE	980	5000	Lorain			Springfield			Zanesville			Henryetta			KLCO	1280	1000
Defiance			WLRO	1380	500	WBLY	1600	1000	WHIZ	1240	1000	KGCG	1590	500	Pryor		
WONW	1280	1000	Mansfield			WIZE	1340	1000	OKLAHOMA			Hobart			KMYZ	1570	1000
Delaware			WCLW	1140	250	Steubenville			Ada			KTJS	1420	1000	Sallisaw		
WDLR	1550	500	WMAN	1400	1000	WLIT	950	1000	KADA	1230	1000	Holdenville			KRBB	1560	250
Dover			Marietta			WSTV	1340	1000	Altus			KVYL	1370	500	Sand Springs		
WJER	1450	1000	WBRJ	910	5000	Tiffin						Hugo			KTOW	1340	500

Sapulpa			Coos Bay			Lebanon			KYES	950	1000	WBVP	1230	1000	Connellsville		
KXOJ	1550	500	KHSN	1230	1000	KGAL	920	1000	Salem			Bedford			WCVI	1340	1000
Shawnee			KYNG	1420	1000	Lincoln City			KBZY	1490	1000	WAYC	1600	5000	Corry		
KGFF	1450	1000	Coquille			KBCH	1380	1000	KCCS	1220	1000	WBFD	1310	5000	WWCB	1370	1000
Stillwater			KWRO	630	5000	Mc Minnville			KGAY	1430	5000	Bellefonte			Coudersport		
KSPI	780	250	Corvallis			KCYX	1260	1000	KSLM	1390	5000	WBLF	970	1000	WFRM	600	1000
Tahlequah			KFLY	1240	1000	Medford			Seaside			Berwick			Danville		
KTLQ	1350	1000	KLOO	1340	1000	KBOY	730	1000	KSWB	930	1000	WBRX	1280	1000	WPGM	1570	1000
Tulsa			KOAC	550	5000	KHUG	1300	5000	Springfield			Bethlehem			Doylestown		
KAKC	970	2500	Cottage Grove			KISD	860	1000	KORE	1050	1000	WGPA	1100	250	WBUX	1570	5000
KELI	1430	5000	KNND	1400	1000	KMED	1440	5000	St. Helens			Bloomensburg			Du Bois		
KFMJ	1050	1000	Dallas			KYJC	1230	1000	KOHI	1600	1000	WCNR	930	1000	WCED	1420	5000
KMOD	1300	5000	KWIP	1460	5000	Myrtle Creek			Sweet Home			WHLM	550	1000	Easton		
KRMG	740	50000	Enterprise			KROR	1360	1000	KFIR	1370	1000	Braddock			WEEX	1230	1000
KVOO	1170	50000	KWVR	1340	250	Newport			The Dalles			WLOA	1550	1000	WEST	1400	1000
Vinita			Eugene			KNPT	1310	5000	KACI	1300	1000	Bradford			Ebensburg		
KVIN	1470	500	KASH	1600	5000	North Bend			KODL	1440	5000	WESB	1490	1000	WEND	1580	1000
Wagoner			KATR	1320	1000	KBBR	1340	1000	Tillamook			Brownsville			Elizabethtown		
KWOK	1530	250	KBDF	1280	5000	Ontario			KTIL	1590	5000	WASP	1130	5000	WPDC	1600	500
Weatherford			KEED	1450	1000	KSRV	1380	5000	Toledo			Butler			Emporium		
KWEY	1590	1000	KPNW	1120	50000	Oregon City			KTDO	1230	1000	WBUT	1050	500	WLEM	1250	1000
Wewoka			KUGN	590	5000	KYXI	1520	50000	Umatilla			WISR	680	250	Ephrata		
KWSH	1260	1000	Grants Pass			Pendleton			KLWJ	1090	2500	Canonsburg			WGSA	1310	5000
Woodward			KAGI	930	5000	KTIX	1240	1000	Woodburn			WARO	540	250	Erie		
KSIW	1450	1000	KAJO	1270	5000	KUMA	1290	5000	KWRC	940	250	Carbondale			WEYZ	1450	1000
OREGON			Gresham			Portland			PENNSYLVANIA			WC DL	1440	5000	WJET	1400	1000
Albany			KRDR	1230	1000	KBPS	1450	1000	Allentown			Carlisle			WLKK	1260	5000
KRKT	990	250	Hermiston			KEX	1190	50000	WAEB	790	1000	WHYL	960	5000	WRIE	1330	5000
KWIL	790	1000	KOHU	1360	1000	KGW	620	5000	WHOL	1600	500	WIOO	1000	1000	Everett		
Ashland			Hillsboro			KKEY	1150	5000	WKAP	1320	5000	Carnegie			WSKE	1050	1000
KCMX	580	1000	KUIK	1360	1000	KPAM	1410	5000	WSAN	1470	5000	WPLW	1590	1000	Farrell		
KDOV	1350	1000	Hood River			KPDQ	800	1000	Altoona			Chambersburg			WFR	1470	1000
Astoria			KIHR	1340	1000	KUPL	1330	5000	WFBG	1290	5000	WCBG	1590	5000	Franklin		
KAST	1370	1000	John Day			KWJJ	1080	50000	WRTA	1240	1000	WCHA	800	1000	Wfra	1450	1000
KVAS	1230	1000	KJDY	1400	1000	KXL	750	50000	WVAM	1430	5000	Charleroi			Gettysburg		
Baker			Klamath Falls			KYTE	970	5000	Ambridge			WESA	940	1000	WGET	1320	1000
KBKR	1490	1000	KAGO	1150	5000	Prineville			WBMA	1460	500	Chester			Greensburg		
Bend			KFLS	1450	1000	KRCO	690	1000	Annville			WQIQ	1590	1000	WHJB	620	2500
KBND	1110	10000	KLAD	960	5000	Redmond			WAHT	1510	5000	WVCH	740	1000	Greenville		
KGRL	940	1000	La Grande			KPRB	1240	1000	Apollo			Clarion			WGRP	940	1000
Brookings			KLBK	1450	1000	Reedsport			WAVL	910	5000	WWCH	1300	1000	Grove City		
KURY	910	1000	Lake Oswego			KDUN	1470	5000	Barnesboro			Clearfield			WSAJ	1340	100
Burns			KLIQ	1290	5000	Roseburg			WNCC	950	500	WCPA	900	1000	Hanover		
KRNS	1230	1000	Lakeview			KQEN	1240	1000	Beaver Falls			Coatesville			WHVR	1280	5000
			KQIK	1230	1000	KRNR	1490	1000				WCOJ	1420	5000	Harrisburg		

WCMB	1460	5000	WKVA	920	1000	WFLN	900	1000	WGBI	910	1000	West Chester			Guayama			
WFEC	1400	1000	WMRF	1490	1000	WHAT	1340	1000	WICK	1400	1000	WCHE	1520	250	WMSW	1120	250	
WHP	580	5000	Lock Haven			WIP	610	5000	Selinsgrove			Wilkes Barre			WXRf	1590	1000	
WKBO	1230	1000	WPBZ	1230	1000	WPEN	950	5000	WSEW	1240	1000	WBAX	1240	1000	Humacao			
Hazleton			Loretto			WRCP	1540	50000	Shamokin			WILK	980	5000	WALO	1240	1000	
WAZL	1490	1000	WAMQ	1400	1000	WTEL	860	10000	WISL	1480	1000	WKRZ	1340	1000	Isabela			
Honesdale			Lykens			WZZD	990	50000	Sharon			Williamsport			WISA	1390	1000	
WDNH	1590	2500	WQIN	1290	1000	Philipsburg			WPIC	790	1000	WLYC	1050	1000	Juana Diaz			
Huntingdon			Martinsburg			WPHB	1260	5000	Shenandoah			WRAC	1400	1000	WCGB	1050	1000	
WHUN	1150	5000	WJSM	1110	1000	Phonerville			WMBT	1530	2500	WWPA	1340	1000	Juncos			
WQRO	1080	1000	Mc Connellsburg			WYIS	690	1000	Shippensburg			Windber			WFAB	1460	500	
Indiana			WVFC	1530	1000	Pittsburgh			WSHP	1480	500	WVBR	1350	2500	Lares			
WDAD	1450	1000	Mc Keesport			KDKA	1020	50000	Somerset			York			WGDL	1200	250	
Jeanette			WEDO	810	1000	KQV	1410	5000	WVSC	990	5000	WNOW	1250	1000	Manati			
WBCW	1530	1000	WIXZ	1360	5000	WEPP	1080	50000	South Williamsport			WSBA	910	5000	WMNT	1500	1000	
Jersey Shore			Meadville			WKTQ	1320	5000	WMPT	1450	1000	WZIX	1350	5000	Mayaguez			
WJSA	1600	1000	WMGW	1490	1000	WPIT	730	5000	St. Marys						WAEI	600	1000	
Johnstown			Mexico			WTAE	1250	5000	WKBI	1400	1000	PUERTO RICO				WKJB	710	5000
WCRO	1230	1000	WJUN	1220	1000	WWSW	970	5000	State College			Aguadilla			WORA	760	5000	
WJAC	850	10000	Milton			WYJZ	860	1000	WMAJ	1450	1000	WABA	850	5000	WPRA	990	1000	
WJNL	1490	1000	WMLP	1380	1000	Pittston			WRSC	1390	2500	WUNA	1340	250	WTLI	1300	1000	
Kane			Monroeville			WARD	1540	1000	Stroudsburg			Arecibo			Morovis			
WKZA	960	1000	WRUA	1510	250	Portage			WVPO	840	250	WCMN	1280	5000	WGFE	1580	1000	
Kittanning			Montrose			WRML	1470	500	Sunbury			WMIA	1070	500	Orocovis			
WACB	1380	1000	WPEL	1250	1000	Pottstown			WKOK	1070	10000	WNIC	1230	1000	WKCK	1470	1000	
Lancaster			Mt. Carmel			WPAZ	1370	1000	Titusville			Barceloneta			Penuelas			
WLAN	1390	5000	WMIM	1590	1000	Pottsville			WTIV	1230	1000	WBQN	1160	1000	WENA	1330	500	
WLPA	1490	1000	Nanticoke			WPAM	1450	1000	Towanda			Bayamon			WPPC	1570	1000	
Lansdale			WNAK	730	1000	WPPA	1360	5000	WTTT	1550	500	WLUZ	1600	1000	Ponce			
WNPV	1400	5000	New Castle			Punxsutawney			Tyrone			WRSJ	1560	5000	WEUC	1420	1000	
Lansford			WBZY	1140	5000	WPME	1540	5000	WTRN	1340	1000	Cabo Rojo			WISO	1260	1000	
WLSH	1410	5000	WKST	1280	1000	Reading			Uniontown			WEKO	930	500	WLEO	1170	250	
Latrobe			New Kensington			WEEU	850	1000	WMBS	590	1000	Caguas			WPAB	550	5000	
WCNS	1480	500	WKPA	1150	1000	WHUM	1240	1000	Warren			WNEL	1430	5000	WPRP	910	5000	
WQTV	1570	1000	Norristown			WRAW	1340	1000	WNAE	1310	5000	WVJP	1110	2500	WZBS	1490	1000	
Lebanon			WNAR	1110	2500	Red Lion			Washington			Camuy			Salinas			
WLBK	1270	5000	North East			WGCB	1440	1000	WJPA	1450	1000	WCHQ	1360	1000	WHQY	1210	5000	
WVLV	940	1000	WHYP	1530	1000	Roaring Spring			WKEG	1110	1000	Carolina			San German			
Lehighton			Oil City			WKMC	1370	5000	Waynesboro			WIDA	1400	1000	WBOZ	1090	250	
WYNS	1150	1000	WOYL	1340	1000	Sayre			WAYZ	1380	1000	Cayey			San Juan			
Levittown			Philadelphia			WATS	960	1000	WEEQ	1130	1000	WLEY	1080	250	WAPA	680	10000	
WBCB	1490	1000	KYW	1060	50000	Scranton			Waynesburg			Coama			WBMJ	1190	10000	
Lewisburg			WCAU	1210	50000	WARM	590	5000	WANB	1580	1000	WCPR	1450	1000	WJOA	870	5000	
WTGC	1010	250	WDAS	1480	5000	WBQW	1320	1000	Wellsboro			Fajardo			WIAC	740	10000	
Lewistown			WFIL	560	5000	WEJL	630	500	WNBT	1490	1000	WMDD	1480	5000	WIPR	940	10000	

WKAQ	580	5000	SOUTH CAROLINA			WPCC	1410	1000	WHSC	1450	1000	Pageland			KDBQ	1420	1000
WKVM	810	50000	Abbeville			Columbia			WSDC	1490	250	WCPL	1510	500	KKAA	1560	10000
WOSO	1030	10000	WABV	1590	1000	WCOS	1400	1000	Hemingway			Pickens			KSDN	930	5000
WQBS	630	5000	Aiken			WIS	560	5000	WKYB	1000	10000	WPKE	1540	10000	Belle Fourche		
WQII	1140	10000	WAKN	990	1000	WOIC	1320	5000	Holly Hill			Ridgeland			KBFS	1450	1000
WRAI	1520	10000	WKTU	1300	500	WQXL	1470	5000	WKHJ	1440	1000	WJMR	1430	1000	Brookings		
WUNO	1320	5000	Allendale			WXAP	1230	1000	Johnston			Rock Hill			KBRK	1430	1000
San Sebastian			WDOG	1460	1000	Conway			WJES	1190	1000	WRHI	1340	1000	Deadwood		
WFBA	1460	500	Anderson			WJXY	1050	5000	WJES	1570	250	WTYC	1150	1000	KDSJ	980	5000
Utahdo			WAIM	1230	1000	WLAT	1330	5000	Kershaw			Seneca			Hot Springs		
WUPR	1530	1000	WANS	1280	5000	Darlington			WKSC	1300	500	WSNW	1150	1000	KOBH	580	500
Vega Baja			Bamberg			WDAR	1350	1000	Kingstree			Spartanburg			Huron		
WEGA	1350	500	WWBD	790	1000	Dillon			WDKD	1310	5000	WASC	1530	1000	KIJV	1340	1000
Vieques			Barnwell			WDSC	800	1000	WKSP	1090	1000	WKDY	1400	1000	KOKK	1190	500
WIVV	1370	1000	WBAW	740	1000	Easley			Lake City			WORD	910	5000	Lemmon		
Yabucoa			Batesburg			WELP	1360	1000	WJOT	1260	1000	WSPA	950	5000	KBJM	1400	1000
WWEW	840	5000	WBRL	1430	5000	Florence			Lancaster			St. George			Madison		
Yauco			Beaufort			WJMX	970	5000	WAGL	1560	50000	WQIZ	810	5000	KJAM	1390	500
WKFE	1550	250	WBEU	960	1000	WOLS	1230	1000	WLCM	1360	1000	St. Matthews			Milbank		
RHODE ISLAND			Belton			WYNN	540	250	Laurens			WQKI	710	1000	KMSD	1510	5000
Newport			WHPB	1390	1000	Fountain Inn			WLBG	860	1000	Summerville			Mitchell		
WADK	1540	1000	Bennettsville			WFIS	1600	1000	Loris			WAZS	980	1000	KORN	1490	1000
Pawtucket			WBSC	1550	10000	Gaffney			WLSC	1570	1000	Sumter			Mobridge		
WGNG	550	1000	Bishopville			WEAC	1500	1000	Manning			WDXY	1240	1000	KOLY	1300	5000
Providence			WAGS	1380	1000	WFGN	1570	250	WYMB	1410	1000	WFIG	1290	1000	Pierre		
WEAN	790	5000	Burnettown			Georgetown			Marion			WSSC	1340	1000	KCCR	1240	1000
WHIM	1110	5000	WVAP	1510	1000	WGBB	1470	1000	WATP	1430	1000	Surfside Beach			KGFX	1060	10000
WHJJ	920	5000	Camden			WGTN	1400	1000	Moncks Corner			WYAK	1270	5000	Rapid City		
WICE	1290	5000	WACA	1590	1000	Greenville			WBER	950	500	Travelers Rest			KIMM	1150	5000
WLKW	990	50000	WPUB	1130	1000	WESC	660	10000	Mullins			WBBR	1580	5000	KKLS	920	5000
WPRO	630	5000	Cayce			WFBC	1330	5000	WJAY	1280	5000	Union			KOTA	1380	5000
WRIB	1220	1000	WCAY	620	500	WHYZ	1070	50000	Myrtle Beach			WBCU	1460	1000	KTOQ	1340	1000
Warwick			Charleston			WHRB	1490	1000	WMYB	1450	1000	Walhalla			Redfield		
WARV	1590	1000	WCSC	1390	5000	WUUU	1260	5000	WTGR	1520	5000	WGOG	1000	1000	KOKD	1380	500
West Warwick			WOKE	1340	1000	WQOK	1440	5000	Newberry			Walterboro			Sioux Falls		
WKRI	1450	1000	WPAL	730	1000	Greenwood			WKDK	1240	1000	WALD	1060	1000	KELO	1320	5000
Westerly			WQSN	1450	1000	WCBS	1450	1000	WKMG	1520	1000	Winnsboro			KKRC	1230	1000
WERI	1230	1000	WTMA	1250	5000	WGSW	1350	1000	North Augusta			WCKM	1250	500	KLYX	1520	500
Wickford			Cheraw			WMTY	1090	1000	WKZK	1600	500	Woodruff			KNWC	1270	2500
WMYD	1370	500	WCRE	1420	1000	Greer			North Charleston			WSJV	1510	1000	KSOO	1140	10000
Woonsocket			Chester			WCKI	1300	1000	WNCG	910	500	York			KXRB	1000	10000
WNRI	1380	1000	WGCD	1490	1000	WEAB	800	250	Orangeburg			WBZK	980	1000	Sturgis		
WWON	1240	1000	Clemson			Hampton			WDIX	1150	5000	SOUTH DAKOTA			KBHB	810	5000
			WCCP	1560	1000	Hartsville			WORG	1580	1000	Aberdeen			Vermillion		
			Clinton						WTND	920	1000				KUSD	690	1000

KVRA	1570	500	WNOO	1260	5000	WEHA	1090	1000	WJCW	910	5000	WMSR	1320	5000	WATO	1290	5000
Volga			Church Hill			Erwin			Jonesboro			Martin			WORI	1550	1000
KVAA	910	1000	WMCH	1260	1000	WEMB	1420	5000	WJSO	1590	5000	WCMT	1410	1000	Oneida		
Watertown			Clarksville			Etowah			Kingsport			Maryville			WBNT	1310	1000
KSDR	1480	1000	WDXN	540	1000	WCPH	1220	1000	WGOC	1090	1000	WGAP	1400	1000	Paris		
KWAT	950	1000	WJZM	1400	1000	Fayetteville			WKIN	1320	5000	Mc Kenzie			WMUF	1000	500
Winner			WKVL	1550	250	WEKR	1240	1000	WKPT	1400	1000	WHDM	1440	5000	WTPR	710	250
KWYR	1260	5000	Cleveland			WIXC	1140	5000	Kingston			Mc Minnville			Parsons		
Yankton			WBAC	1340	1000	Franklin			WTNR	1410	500	WAKI	1230	1000	WTBP	1550	500
KYNT	1450	1000	WCLE	1570	2500	WAGG	950	1000	Knoxville			WBMC	960	500	Pikeville		
WNAX	570	5000	Clinton			WIZO	1380	5000	WBMK	1430	1000	Memphis			WUAT	1110	250
TENNESSEE			WYSH	1380	1000	Gallatin			WHEL	1240	1000	KWAM	990	10000	Pulaski		
Adamsville			Collierville			WAMG	1130	2500	WITA	1490	1000	WDIA	1070	50000	WKSR	1420	1000
WLIC	1540	2500	WMSO	1590	500	WHIN	1010	1000	WIVK	850	50000	WHBQ	560	5000	Ripley		
Alamo			Columbia			Greeneville			WVGN	1340	1000	WLK	1340	1000	WTRB	1570	1000
WCTA	1280	500	WKRM	1340	1000	WGRV	1340	1000	WKXV	900	1000	WMC	790	5000	Rockwood		
Alcoa			WMCP	1280	5000	WSMG	1450	1000	WNOX	990	10000	WMPS	680	10000	WOFE	580	1000
WEAG	1470	1000	Cookeville			Harriman			WRJZ	620	5000	WMQM	1480	5000	Rogersville		
Ardmore			WHUB	1400	1000	WJZA	1600	5000	WSKT	1580	5000	WREC	600	5000	WRGS	1370	1000
WSLV	1110	1000	WPTN	1550	250	Harrogate			La Follette			WWEE	1430	1000	Savannah		
Athens			Copper Hill			WSVQ	740	250	WLAF	1450	1000	Milan			WORM	1010	250
WLAR	1450	1000	WLSB	1400	1000	Hartsville			Lafayette			WKBJ	1600	1000	Selmer		
WYXI	1390	2500	Covington			WJKM	1090	1000	WEEN	1460	1000	Millington			WDTM	1130	250
Benton			WKBL	1250	1000	Henderson			Lawrenceburg			WTNN	1380	1000	Sevierville		
WBIN	1540	1000	Cowan			WHHM	1580	250	WDXE	1370	1000	Morristown			WSEV	930	5000
Bolivar			WZYX	1440	1000	Hohenwald			Lebanon			WCRK	1150	1000	Shelbyville		
WBOL	1560	250	Crossville			WMLR	1230	1000	WCOR	900	500	WMTN	1300	5000	WHAL	1400	1000
Bristol			WAEW	1330	1000	Humboldt			WLSN	1600	500	Mountain City			WLJ	1580	1000
WKYE	1550	1000	WCSV	1490	1000	WHMT	1190	5000	Lenoir City			WMCT	1390	1000	Smithville		
WOPI	1490	1000	Dayton			WIRJ	740	250	WBLC	1360	1000	Murfreesboro			WJLE	1480	1000
Bronsville			WDNT	1280	1000	Huntingdon			WLIL	730	1000	WGNS	1450	1000	Soddy Daisy		
WBHT	1520	250	WREA	1520	5000	WJPJ	1530	1000	Lewisburg			WMTS	810	5000	WCHU	1550	250
Camden			Dickson			Jackson			WAXO	1220	250	Nashville			WEDG	1240	1000
FWFL	1220	250	WDKN	1260	1000	WDXI	1310	5000	WJJM	1490	1000	WKDA	1240	1000	South Pittsburg		
Carthage			Donelson			WJAK	1460	1000	Lexington			WLAC	1510	50000	WEPG	910	1000
WRKM	1350	1000	WAMB	1170	25000	WTJS	1390	5000	WDXL	1490	1000	WMAK	1300	5000	Sparta		
Centerville			Dunlap			Jamestown			Livingston			WNAH	1360	1000	WSMT	1050	1000
WHLP	1570	5000	WSVC	1190	250	WCLC	1260	1000	WLIV	920	1000	WSIX	980	5000	WUCR	860	1000
Chattanooga			Dyersburg			WDEB	1500	1000	Lookout Mountain			WSM	650	50000	Spring City		
WDEF	1370	5000	WDSG	1450	1000	Jefferson City			WFLI	1070	50000	WVOL	1470	5000	WXQK	970	500
WDOO	1310	5000	WTRO	1330	500	WJFC	1480	500	Madison			WWGM	1560	10000	Springfield		
WDXB	1490	1000	Elizabethton			Jellico			WJRB	1430	5000	Newport			WDBL	1590	1000
WGOW	1150	5000	WBEJ	1240	1000	WJJT	1540	1000	Madisonville			WLIK	1270	5000	WSGI	1290	500
WMOC	1450	1000	WIDD	1520	1000	Johnson City			WZZI	1250	500	WNPC	1060	1000	Sweetwater		
			Englewood			WETB	790	5000	Manchester			Oak Ridge			WDEH	800	1000

Tazewell			KALT	900	1000	Brownsville			KUNO	1400	1000	KAMA	1060	10000	KPAR	1420	5000
WNTT	1250	500	Austin			KBOR	1600	1000	Corsicana			KELP	920	1000	Grand Prairie		
Trenton			KIXL	970	1000	Brownwood			KAND	1340	1000	KHEY	690	10000	KKDA	730	500
WTNE	1530	1000	KLBJ	590	5000	KBWD	1380	1000	Crane			KISO	1150	1000	Greenville		
Tullahoma			KNOW	1490	1000	KXYL	1240	1000	KBSN	810	1000	KKOL	1590	1000	KGVL	1400	1000
WGBY	740	250	KOKE	1370	1000	Bryan			Crockett			KROD	600	5000	Hallettsville		
Union City			KVET	1300	5000	KAGC	1510	500	KIVY	1290	1000	KSET	1340	1000	KRJH	1520	250
WENK	1240	1000	Ballinger			KTAM	1240	1000	Cuero			KTSM	1380	5000	Hamilton		
Wartburg			KRUN	1400	1000	Burnet			KEWS	1600	500	Elgin			KCLW	900	250
WECO	940	1000	Bay City			KHLB	1340	1000	Daingerfield			KELG	11440	500	Harlingen		
Waverly			KIOX	1270	1000	Cameron			KEGG	1560	1000	Falturrias			KGBT	1530	50000
WPHC	1060	1000	Baytown			KMIL	1330	500	Dalhart			KPSO	1260	500	Hemphill		
Waynesboro			KBUK	1360	1000	Canyon			KXIT	1410	500	Farwell			KAWS	1530	1000
WNBG	1400	1000	Baumont			KHBJ	1550	1000	Dallas			KZOL	1570	250	Henderson		
Winchester			KALO	990	1000	Carrizo Springs			KAAM	1310	5000	Floiydada			KGRI	1000	250
WCDT	1340	1000	KAYC	1450	1000	KBEN	1450	1000	KBOX	1480	5000	KFBA	900	250	KWRD	1470	500
Woodbury			KJET	1380	1000	Carthage			KLIF	1190	50000	Fredericksburg			Hereford		
WBRY	1540	500	KLVI	560	5000	KGAS	1590	2500	KPBC	1040	1000	KNAF	910	1000	KPAN	860	250
TEXAS			Beeville			Center			KRLD	1080	50000	Freeport			Highland Park		
Ablene			KIBL	1490	1000	KDET	930	1000	KSKY	660	10000	KBRZ	1460	500	KVIL	1150	1000
KBER	1560	500	Bellville			Childress			WFAA	570	5000	Ft. Stockton			Hillsboro		
KEAN	1280	500	KACO	1090	250	KCTX	1510	250	Del Rio			KFST	860	250	KhBR	1560	250
KRBC	1470	5000	Belton			Clarksville			KDLK	1230	1000	t. Worth			Hondo		
KWKC	1340	1000	KTon	940	1000	KCAR	1350	500	KWMC	1490	1000	KFJZ	1270	5000	KRME	1460	500
Alamo Heights			Big Lake			Cleburne			Denison			KJIM	870	250	Houston		
KDRY	1110	1000	KWGH	1290	1000	KCLE	1120	250	KDSX	950	500	KNOK	970	1000	KCOH	1430	1000
Alice			Big Spring			Cleveland			Denton			KTIA	1540	50000	KENR	1070	10000
KOPY	1070	1000	KBST	1490	1000	KJCH	1410	500	KDNT	1440	5000	KXOL	1360	5000	KEYH	850	10000
Alpine			KBYG	1400	1000	Coleman			Diboll			WBAP	820	50000	KILT	610	5000
KVLF	1240	1000	KHEM	1270	1000	KSTA	1000	250	KSPL	1260	1000	Gainesville			KLAT	1010	5000
Alvin			Bonham			Colelge Station			Dimmitt			KGAF	1580	250	KNUZ	1230	1000
KTEK	1110	500	KFYN	1420	250	WTAW	1150	1000	KDHN	1470	500	Galveston			KPRC	950	5000
Amarillo			Borger			Colorado City			Dumas			KGBC	1540	1000	KTRH	740	50000
KDJW	1010	5000	KBBB	1600	5000	KVMC	1320	1000	KDDD	800	250	KILE	1400	1000	KULF	790	5000
KGNC	710	10000	KQTY	1490	1000	Comanche			Eagle Pass			Georgetown			KXYZ	1320	5000
KIXZ	940	5000	Bowie			KCOM	1550	250	KEPS	1270	1000	KGTM	1530	1000	KYOK	1590	5000
KPUR	1440	5000	KBAN	1410	500	Conroe			Eastland			Gilmer			Huntsville		
KQIZ	1360	500	Brady			KIKR	900	500	KERC	1590	500	KHYM	1060	10000	KSAM	1490	1000
KZIP	1310	1000	KNEL	1490	1000	KSKS	1140	250	Edinburg			Gladewater			Jacksonville		
Andrews			Breckenridge			Corpus Christi			KURV	710	250	KEES	1430	5000	KEBE	1400	1000
KA CT	1360	1000	KSTB	1430	1000	KCCT	1150	1000	Edna			Gonzales			Jasper		
Athens			Brenham			KCTA	1030	50000	KOTI	1130	5000	KCTI	1450	250	KTXJ	1350	1000
KBUD	1410	1000	KTTX	1280	1000	KEYS	1440	1000	El Campo			Grahma			Junction		
Atlanta			Brownfield			KRYS	1360	1000	KULP	1390	500	KSWA	1330	500	KMBL	1450	1000
			KKUB	1300	1000	KSIX	1230	1000	El Paso			Granbury			Kenedy		

KAML	990	250	KKYR	1410	500	KYXX	920	1000	Rusk			KDWT	1400	1000	KRGV	1290	5000
Kermit			KMHT	1450	1000	Orange			KTU	1580	500	Stephenville			Wharton		
KERB	600	1000	Mc Allen			KOGT	1600	5000	San Angelo			KSTV	1510	500	KANI	1500	500
Kerrville			KRIO	910	5000	Palestine			KGKL	960	5000	Sulphur Springs			Wichita Falls		
KERV	1230	1000	Mc Kinney			KNET	1450	1000	KPEP	1420	1000	KSST	1230	1000	KNIN	990	10000
Kilgore			KXVI	1600	5000	Pampa			KQSA	1260	1000	Sweetwater			KTRN	1290	5000
KOCA	1240	1000	Memphis			KGRO	1230	1000	KTEO	1340	1000	KXOX	1240	1000	KWFT	620	5000
Killeen			KLSR	1130	1000	KPDN	1340	1000	San Antonio			Taylor			Winters		
KIIZ	1050	250	Merkel			Paris			KAPE	1480	500	KTAE	1260	1000	KRWT	1060	1000
Kingsville			KBGG	1500	1000	KPLT	1490	1000	KBUC	1310	5000	Temple			Woodville		
KINE	1330	1000	Mexia			KPRE	1250	500	KCOR	1350	5000	KTEM	1400	1000	KVLL	1220	250
La Grange			KBUS	1590	500	Pasadena			KEDA	1540	5000	Terrell					
KVLG	1570	250	Midland			KIKK	650	250	KFHM	1150	1000	KTER	1570	250	UTAH		
Lamesa			KCRS	550	5000	KLVL	1480	1000	KKYX	680	50000	Terrel Hills			Blanding		
KET	690	250	KJBC	1150	1000	Pearsall			KMAC	630	5000	KCCW	930	5000	KUTA	790	1000
Lampasas			KMND	1510	500	KVWG	1280	500	KONO	860	5000	Texarkana			Brigham City		
KCYL	1450	1000	KWEL	1070	1000	Pecos			KTSA	550	5000	KADO	940	2500	KBUH	800	500
Laredo			Mineola			KIUN	1400	1000	KUKA	1250	1000	KCMC	740	1000	Cedar City		
KLAR	1300	1000	KMOO	1510	500	Perryton			WOAI	1200	50000	KTFS	1400	1000	KBRE	940	10000
KVOZ	1490	1000	Mineral Wells			KEYE	1400	1000	San Marcos			Texas City			KSUB	590	5000
Levelland			KORC	1140	250	Plainview			KCON	1470	250	KYST	920	1000	Centerville		
KLVT	1230	1000	Mission			KKYN	1090	5000	San Saba			Tulia			KBBX	1600	5000
Liberty			KIRT	1580	1000	KVOP	1400	1000	KBAL	1410	500	KTUE	1260	1000	Delta		
KPXE	1050	250	Monahans			Pleasanton			Seguin			Tyler			KNAK	540	1000
Littlefield			KVKM	1330	5000	KBOP	1380	1000	KWED	1580	1000	KDOK	1490	1000	Granger		
KZZN	1490	1000	Morton			Port Arthur			Seminole			KTB	600	1000	KRGO	1550	10000
Livingston			KRAN	1280	500	KEAM	1510	5000	KIKZ	1250	1000	KTYL	1330	1000	Logan		
KETX	1440	5000	Mt. Pleasant			KOLE	1340	1000	Seymour			KZEY	690	1000	KBQ	1390	5000
Lockhart			KIMP	960	1000	KPAC	1250	5000	Uvalde	1230	1000	KVNU			KVNU	610	5000
KCLT	1060	250	Muleshoe			Port Lavaca			Shamrock			KVOU	1400	1000	Manti		
Longview			KMUL	1380	1000	KGUL	1560	500	KBYP	1580	250	Vernon			KMTI	1590	5000
KFRO	1370	1000	Nacogdoches			Port Neches			Sherman			KVWC	1490	1000	KMTI	1340	1000
KLUE	1280	1000	KEEE	1230	1000	KDLF	1150	500	KIKM	910	1000	Victoria			Moab		
Lubbock			KSFA	860	1000	Post			KTXO	1500	1000	KNAL	1410	500	KURA	1450	1000
KEND	1590	1000	Navasota			KPOS	1370	1000	Silsbee			KVIC	1340	1000	Murray		
KFYO	790	5000	KWBC	1550	250	Quanah			KKAS	1300	500	Waco			KPRQ	1230	1000
KLFB	1420	500	New Boston			KOLJ	1150	500	Sinton			KKIK	1010	10000	Ogden		
KLLL	1460	1000	KNBO	1530	1000	Rails			KIKN	1590	1000	KRZI	1580	1000	KANN	1090	5000
KRLB	580	500	New Braunfels			KCLR	1530	5000	Staton			KWTX	1230	1000	KJON	1490	1000
KSAX	1340	1000	KGNB	1420	1000	Raymondville			KCAS	1050	250	WACO	1460	1000	KLO	1430	5000
KSEL	950	5000	Odessa			KSOX	1240	1000	Snyder			Waxahachie			KSVN	730	1000
Lufkin			KJTT	1000	250	Robstown			KSNY	1450	1000	KBEC	1390	500	Price		
KLUF	1420	1000	KOYL	1310	1000	KROB	1510	500	Sonora			Weatherford			KOAL	1230	1000
KRBA	1340	1000	KOZA	1230	1000	Rosenberg			KVRN	980	1000	KZEE	1220	500	KRPX	1080	2500
Marshall			KRIG	1410	1000	KFRD	980	1000	Stamford			Weslaco			Provo		

KDOT	960	5000	WIKE	1490	1000	WODY	900	500	Crewe			Highland Springs			Norton		
KEYY	1450	1000	Randolph			Bedford			WSVS	800	5000	WENZ	1450	1000	WNVA	1350	5000
KFTN	1400	1000	WCVR	1320	1000	WBLT	1350	1000	Crozet			Hillsville			Onley		
Richfield			Rutland			Big Stone Gap			WPED	810	500	WHHV	1400	1000	WESR	1330	5000
KSVC	980	5000	WHWB	1000	1000	WLSD	1220	1000	Culpeper			Hopewell			Orange		
Roosevelt			WSYB	1380	5000	Blacksburg			WCVA	1490	1000	WHAP	1340	1000	WJMA	1340	1000
KNEU	1250	5000	Springfield			WKEX	1430	1000	Danville			Jamesville			Pennington Gap		
Salt Lake City			WCFR	1480	5000	WQBQ	710	10000	WBTM	1330	5000	WEXM	1520	500	WSWV	1570	1000
KALL	910	5000	St. Albans			Blackstone			WDVA	1250	5000	Lawrenceville			Petersburg		
KCPX	1320	5000	WWSR	1420	1000	WKLTV	1440	5000	WILA	1580	1000	WLES	580	500	WSSV	1240	1000
KLUB	570	5000	St. Johnsbury			Bluefield			WYPR	970	1000	Lebanon			Portsmouth		
KSL	1160	50000	WSTJ	1340	1000	WBDY	1190	10000	Emporia			WLRV	1380	500	WNIS	1350	5000
KWHO	860	1000	Waterbury			Bristol			WEVA	860	1000	Leesburg			WPCE	1400	1000
KWMS	1280	5000	WDEV	550	5000	WFHG	980	5000	Fairfax			WAGE	1290	1000	WPMH	1010	5000
Sandy			Wells River			WZAP	690	10000	WEEL	1310	5000	Lexington			Pulaski		
KSXX	630	1000	WYKR	1490	1000	Broadway			Falls Church			WREL	1450	1000	WBLB	1510	1000
South Salt Lake City			White River Junction			WBTX	1470	5000	WFAX	1220	5000	LURAY			WPUV	1580	5000
KRSP	1060	10000	WNHV	910	1000	Brookne			Farmville			WRAA	1330	1000	Quintico		
KSOP	1370	1000				WODI	1230	1000	WFLO	870	1000	Lynchburg			WPWC	1530	250
Spanish Fork			VIRGIN ISLANDS			Charlottesville			WPAK	1490	1000	WBRG	1050	1000	Radford		
KONI	1480	1000	Charlotte Amalie			WCHV	1260	5000	Franklin			WGLM	1320	1000	WRAD	1460	5000
St. George			WSTA	1340	250	WINA	1070	5000	WYSR	1250	1000	WLLL	930	5000	Richlands		
KDXU	1450	1000	WVWI	1000	5000	WXAM	1400	1000	Fredericksburg			WLVA	590	1000	WRIC	540	1000
Tooele			Christiansted			Chase City			WFLS	1350	1000	WWOD	1390	5000	Richmond		
KDYL	990	1000	WSTX	970	5000	WMEK	980	500	WFVA	1230	1000	Manassas			WANT	990	1000
Vernal			Fredericksted, St Croix			Chatham			Front Royal			WPRW	1460	5000	WBBL	1480	5000
KVEL	920	5000	WRRR	1290	500	WKBY	1080	1000	WFRF	1450	1000	Marion			WEET	1320	1000
VERMONT			VIRGINIA			Chesapeake			Galax			WMEV	1010	1000	WGOE	1590	5000
Barre			Abingdon			WCPK	1600	5000	WBOB	1360	5000	WOLD	1330	1000	WKIE	1540	10000
WSNO	1450	1000	WBBI	1230	1000	Chester			Gate City			Martinsville			WLEE	1480	5000
Bennington			Alexandria			WGGM	1410	5000	WGAT	1050	1000	WHEE	1370	5000	WRNL	910	5000
WBTN	1370	1000	WPKX	730	5000	Christiansburg			Gluoucester			WMVA	1450	1000	WRVA	1140	50000
Brattleboro			Altavista			WJJJ	1260	2500	WDDY	1420	1000	Mount Jackson			WTVR	1380	5000
WKVT	1490	1000	WABH	1150	1000	Churchville			Gretna			WSIG	790	1000	WXGI	950	5000
WTSR	1450	1000	WAMV	1420	1000	WABH	1150	1000	WNNR	730	1000	Narrows			Roanoke		
Burlington			Appomattox			Clifton Forge			Grundy			WNRV	990	5000	WFIR	960	5000
WDOT	1400	1000	WTTX	1280	1000	WXCX	1230	1000	WNRG	940	5000	Newport News			WRIS	1410	5000
WJOY	1230	1000	Arlington			Clinchco			Hampton			WGH	1310	5000	WROV	1240	1000
WYMT	620	5000	WABS	780	1000	WDIC	1430	5000	WWDE	1490	1000	WTJZ	1270	1000	WSLC	610	5000
Middlebury			WEAM	1390	5000	Collinsville			Harrisonburg			Norfolk			WTOY	910	1000
WFD	1490	1000	Ashland			WVIC	1530	1000	WHBG	1360	5000	WCMS	1050	5000	Rocky Mount		
Montpelier			WIVE	1430	1000	Colonial Heights			WKCY	1300	5000	WNOR	1230	1000	WNLB	1290	1000
WSKI	1240	1000	Bassett			WPVA	1290	5000	WSVA	550	5000	WRAP	850	5000	WYTI	1570	1000
Newport						Covington			Herndon			WTAR	790	5000	Salem		
						WKEY	1340	1000	WOHN	1440	1000	WZAM	1110	50000	WUEZ	1480	5000

Saltville			KXRO	1320	5000	Hoquiam			Quincy			KGAR	1550	10000	Fisher		
WIAJ	1600	5000	Anacortes			KGHO	1560	1000	KWNC	1370	1000	Walla Walla			WELD	690	500
Smithfield			KAGT	1340	1000	Kelso			Raymond			KHIT	1320	1000	Frost		
WKGM	940	10000	Auburn			KLOG	1490	1000	KAPA	1340	1000	KTEL	1490	1000	WVMR	1370	1000
South Boston			KASY	1220	2500	Kennewick			Renton			KUJ	1420	5000	Grafton		
WHLF	1400	1000	Bellevue			KOTY	1340	1000	KSCR	1420	500	Wenatchee			WVWV	1260	500
WSBV	1560	2500	KZAM	1540	5000	Kirkland			Richland			KPO	560	5000	Hinton		
South Hill			Bellingham			KGAA	1460	5000	KALE	960	5000	KUEN	900	1000	WMTD	1380	1000
WJWS	1370	5000	KGMI	790	5000	Lakewood			Seattle			KWWW	1340	1000	Huntington		
St. Paul			KPUG	1170	10000	KLAY	1480	1000	KAYO	1150	5000	Yakima			WGNT	930	5000
WSPC	1140	1000	Blaine			Longview			KBLE	1050	5000	KBBO	1390	1000	WHTN	800	5000
Staunton			KARI	550	5000	KBAM	1270	5000	KING	1090	50000	KIT	1280	5000	WKSD	1470	5000
WKDW	900	1000	Bremerton			KEDO	1400	1000	KIRO	710	50000	KMWX	1460	5000	Hurricane		
WTON	1240	1000	KBRO	1490	1000	Millwood			KIXI	910	1000	KUTI	980	5000	WZTQ	1080	5000
Stuart			Burien			KCKO	1380	5000	KJR	950	5000	KVGM	930	1000	Keyser		
WHEO	1270	5000	KQIN	800	500	Moses Lake			KMPS	1300	5000				WKLP	1390	1000
Suffolk			Centralia			KSEM	1470	5000	KOMO	1000	50000				Kingwood		
WFOG	1450	1000	KITI	1420	1000	KWIQ	1260	1000	KVI	570	5000				WFSP	1560	1000
Tappahannock			Chehalis			Mountlake Terrace			KXA	770	1000				Logan		
WRAR	1000	500	KELA	1470	5000	KKNW	1510	250	KYAC	1250	5000	Beckley			WLOG	1230	1000
Tazewell			Chelan			Mt. Vernon			KZOK	1590	5000	WCJR	1070	10000	WVOW	1290	5000
WTZE	1470	5000	KOZI	1230	1000	KAPS	1470	500	Shelton			WWNR	620	1000	Madison		
Vinton			Clarkston			KBRC	1430	5000	KMAS	1280	2500	Berkeley Springs			WWBB	1450	1000
WKBA	1550	10000	KCLK	1430	500	Olympia			Spokane			WCST	1010	250	Martinsburg		
Virginia Beach			Colfax			KGy	1240	1000	KGA	1510	50000	Bluefield			WEPM	1340	1000
WVB	1550	5000	KCLX	1450	1000	KITN	920	1000	KHQ	590	5000	WHIS	1440	5000	WRNR	740	500
Warrenton			Colville			Omak			KJRB	790	5000	WKOY	1240	1000	Matewan		
WEER	1250	1000	KCVL	1270	1000	KOMW	680	5000	KMBI	1330	5000	Buckhannon			WHJC	1360	1000
WKCW	1420	5000	Edmonds			Opportunity			KREM	970	5000	WBUC	1460	5000	Milton		
Warsaw			KGDN	630	5000	KZUN	630	1000	KSPQ	1230	1000	Charles Town			WNST	1600	5000
WNNT	690	250	Ellensburg			Othello			KLDY	1280	5000	WXVA	1550	5000	Montgomery		
Waynesboro			KXLE	1240	1000	KRSC	1400	1000	KXLY	920	5000	Charleston			WMON	1340	1000
WANV	970	5000	Ephrata			Pasco			KXXR	1440	5000	WCAW	680	50000	Morgantown		
WAYB	1490	1000	KULE	730	1000	KONA	610	5000	Summer			WCBS	580	5000	WAJR	1440	5000
Williamsburg			Everett			KORD	910	1000	KDFL	1560	250	WKAZ	950	5000	WCLG	1300	1000
WBCI	740	500	KRKO	1380	5000	Port Angeles			Sunnyside			WTIP	1240	1000	Moundsville		
Winchester			KWYZ	1230	1000	KAPY	1290	1000	KREW	1230	1000	WXIT	1490	1000	WEIF	1370	5000
WHPL	610	500	Ferndale			KONP	1450	250	Tacoma			Clarksburg			New Martinsville		
WINC	1400	1000	KBFW	930	1000	Prosser			KMO	1360	5000	WHAR	1340	1000	WETZ	1330	1000
Wytheville			KOQT	1550	10000	KARY	1310	1000	KTAC	850	10000	WPDx	750	1000	Oak Hill		
WYVE	1280	2500	Forks			Pullman			KTNT	1400	1000	WPQZ	1400	1000	WOAY	860	10000
			KVAC	1490	1000	KNOI	1150	1000	Toppenish			WDNE	1240	1000	Parkersburg		
WASHINGTON			Grand Coulee			KWSU	1250	5000	KENE	1490	1000	Fairmont			WADC	1050	5000
Aberdeen			KFDR	1360	1000	Puyallup			Vancouver			WMMN	920	5000	WKYG	1230	1000
KBKW	1450	1000	KNCW	1490	1000	KRPM	1450	1000	KARO	1480	1000	WTCS	1490	1000	WPAR	1450	1000

Pineville			WATW	1400	1000	WKAU	1050	1000	Minocqua			River Falls			Wisconsin, Rapids		
WWYO	970	1000	Auburndale			Kenosha			WFBZ	1570	1000	WEVR	1550	1000	WFHR	1320	5000
Princeton			WBLB	930	5000	WLIP	1050	250	Monroe			Shawano					
WAEY	1490	1000	Baraboo			Kimerly			WEKZ	1260	1000	WOWN	960	1000			
Rainelle			WBOO	740	250	WYNE	1150	5000	Neenah			Sheboygan			WYOMING		
WRRB	1130	1000	Beaver Dam			La Crosse			WNAM	1280	5000	WBHL	1330	5000	Buffalo		
Ravenswood			WBEV	1430	1000	WIZM	1410	5000	Neillsville			WKTS	950	500	KBBS	1450	1000
WMOV	1360	1000	Beloit			WKTY	580	5000	WCCN	1370	5000	Shell Lake			Casper		
Richwood			WBEL	1380	5000	WLCX	1490	1000	New Richmond			WCSW	940	1000	KATI	1400	1000
WVAR	600	1000	WGEZ	1490	1000	Ladysmith			WIXX	1590	5000	WCOV	1290	5000	KTWO	1030	5000
Ronceverte			Berlin			WLDY	1340	1000	Oconto			WCOV	1290	5000	KVOC	1230	1000
WRON	1400	1000	WISS	1090	500	Lake Geneva			WOCO	1260	1000	Stevens Point			Cheyenne		
South Charleston			Black River Falls			WMIR	1550	1000	Oshkosh			WXYQ	1010	1000	KFBC	1240	1000
WSCW	1410	1000	WWIS	1260	1000	Lancaster			WAGO	690	250	Sturgeon Bay			KRAE	1480	1000
Spencer			Chippewa Falls			WGLR	1280	500	WYTL	1490	1000	WDOR	910	1000	KSHY	1370	1000
WVRC	1400	1000	WAYY	1150	5000	Madison			Park Falls			Superior			KULY	1530	10000
St Albans			Cornell			WHA	970	5000	WNBI	980	1000	WAKX	970	1000	Cody		
WKLC	1300	1000	WOGO	680	2500	WIBA	1310	5000	Pewaukee			WDSM	710	10000	KODI	1400	1000
Sutton			Dodgeville			WISM	1480	5000	WQOL	1370	500	Tomah			Douglas		
WSGB	1490	1000	WDMP	810	250	WTSO	1070	10000	Platteville			WTMB	1460	1000	KWIV	1470	1000
Weirton			Durand			WWQM	1550	5000	WSWW	1590	1000	Tomahawk			Evanston		
WEIR	1430	1000	WRDN	1430	1000	Manitowoc			Plymouth			WJJO	810	10000	KEVA	1240	1000
Welch			Eagle River			WCUB	980	1000	WPLY	1420	500	Two Rivers			Gillette		
WELC	1150	1000	WERL	950	1000	WOMT	1240	1000	Port Washington			WRTR	1590	1000	KIML	1270	5000
WxEE	1340	1000	Eau Claire			Marinette			WGLB	1560	250	Wiroqua			Green River		
Weston			WEAQ	790	5000	WCJL	1300	1000	Portage			WISV	1360	1000	KUGR	1490	1000
WHAW	980	1000	WJJK	1400	1000	WMAM	570	250	WPDR	1350	1000	Watertown			Greybull		
Wheeling			WOKL	1050	1000	Marshfield			Poynette			WTTN	1580	1000	KMMZ	1140	5000
WKWK	1400	1000	Fond Du Lac			WDLB	1450	1000	WIBU	1240	1000	Waukesha			Jackson		
WNEU	1600	5000	KFIZ	1450	1000	Mauston			Prairie Du Chien			WAUK	1510	10000	KSGT	1340	1000
WWVA	1170	50000	Fort Atkinson			WRJC	1270	500	WPRE	980	1000	Waupaca			Kemmerer		
White Sulphur Springs			WFAW	940	500	Medford			Racine			WDUX	800	5000	KMER	950	5000
WSLW	1310	5000	Green Bay			WIGM	1490	1000	WRJN	1400	1000	Waupun			Lander		
Williamson			WDUZ	1400	1000	Menomonie			WWEG	1460	500	WLKE	1170	1000	KOVE	1330	5000
WBTH	1400	1000	WGEE	1360	5000	WMNE	1360	1000	Reedsburg			Wausau			Laramie		
			WNFL	1440	5000	Merrill			WRDB	1400	1000	WFRG	1400	1000	KOJO	1490	500
WISCONSIN			Hartford			WJMT	730	1000	Rhineland			WSAU	550	5000	KOWB	1290	5000
Amery			WTKM	1540	500	Milwaukee			WOBT	1240	1000	WXCO	1230	1000	Newcastle		
WXCE	1260	5000	Hayward			WEMP	1250	5000	Rice Lake			West Allis			KASL	1240	1000
Antigo			WHSM	910	5000	WISN	1130	50000	WAQE	1090	1000	WAWA	1590	1000	Powell		
WATK	900	250	Jackson			WMKE	1340	1000	WJMC	1240	1000	West Bend			KPOW	1260	5000
Appleton			WYLO	540	250	WNOV	860	250	Richland Center			WBKV	1470	1000	KRAL	1240	1000
WBHY	1230	1000	Janesville			WKOK	920	5000	WRCO	1450	1000	Wisconsin Dells			Riverton		
WVMS	1570	1000	WCLO	1230	1000	WTMJ	620	5000	Ripon			WNNO	990	500	KVOW	1450	1000
Ashland			Kaukauna			WZUU	1290	1000	WCWC	1600	5000	WNNO	900	1000	Rock Springs		

CBA	1070	50000	Port Au Choix			Kentville			Collingwood			CJBK	1290	10000	Renfrew		
CBAF	1300	5000	DFNW	790	1000	CKEN	1490	1000	CKCB	1400	10000	CKSL	1410	10000	CKOB	1400	1000
CHLR	1380	1000	Port Aux Basques			Middleton			Cornwall			Long Lac			Richmond Hill		
CKCW	1220	25000	CFGN	1230	250	CKAD	1350	1000	CFIX	1170	10000	CHAP	1450	40	CFGM	1320	50000
Newcastle			St. Anthony			New Glasgow			CJSS	1220	1000	Midland			Sarnia		
CFAN	790	5000	CBNA	600	10000	CKEC	1320	5000	Dryden			CKMP	1230	1000	CHOK	1070	10000
St. John			St. John's			Pt. Hawkesbury			CKDR	900	1000	Mississauga			CKJD	1110	10000
CBD	1110	10000	CBN	640	10000	CIGO	1410	10000	Elliot Lake			CJMR	1190	10000	Sault Ste. Marie		
CFBC	930	50000	CJYQ	930	50000	CJFX	580	10000	CKNR	1340	1000	Moosonee			CFYN	1050	10000
CHSJ	1150	10000	VOAR	1230	100	Sydney			CKNS	930	10000	CHMO	1450	50	CKCY	920	10000
Sussex			VOCM	590	10000	CBI	1140	10000	Cher			New Liskeard			Simcoe		
CJCW	590	1000	VOWR	800	5000	CHER	950	10000	CJOB	800	1000	CJTT	1230	1000	CHNR	1600	10000
Ward Creek			Spainard's Bay			CJCB	1270	10000	Guelph			Newmarket			Smith's Falls		
CJCW	950	1000	CHVO	850	5000	Truro			CJOY	1460	10000	CKAN	1480	10000	CJET	630	10000
Woodstock			Stephenville			CKCL	600	10000	Hamilton			Niagara Falls			St. Catharines		
CJCJ	920	10000	CFSX	910	500	Windsor			CHML	900	50000	CJRN	710	5000	CHSC	1220	10000
			Wabush			CFAB	1450	250	CJJD	1280	10000	North Bay			CKTB	510	10000
			CFLW	1340	250	Yarmouth			CKOC	1150	50000	CFCH	600	10000	St. Thomas		
NEWFOUNDLAND						CJLS	1340	5000	Hawkesbury			Oakville			CHLO	1570	10000
Baie Verte			NORTHWEST TERRITORIES						CHPR	1110	250	CHWO	1250	10000	Stratford		
CKIM	1240	1000	Frobisher Bay			ONTARIO			Hearst			Orillia			CJCS	1240	500
Clareville			CFFB	1230	1000	Ajax			CHOO	1390	10000	CFOR	1570	10000	Sudbury		
CKVO	710	10000	Inuvik			CHAK	860	1000	Atikokan			Oshawa			CFBRS/Fr	900	10000
Corner Brook			CHAK	860	1000	CFAC	1240	50	Bancroft			CKAR	1350	10000	CHNO	550	50000
CBY	990	10000	Tuktoyaktuk			CJNH	1240	1000	Barrie			Uttawa			CKSO	790	50000
CFCB	570	1000	CFCT	600	1000	CKBB	950	10000	Belleville			CBO	920	50000	Thunder Bay		
Grander			Yellowknife			CJBO	800	10000	Blind River			CBOF	1250	50000	CBO	800	10000
CBG	1450	1000	CFYK	1340	1000	CJNR	730	1000	Brampton			CFGO	1440	50000	CJLB	1230	1000
CFYQ	1350	1000	CJCD	1240	1000	CKMW	790	5000	Brantford			CFRA	580	50000	CKPR	580	5000
CKGA	730	1000				CKPC	1380	10000	Brockville			CJRC	1150	50000	Tillsonburg		
Goose Bay			NOVA SCOTIA			CJKB			CJFR	1490	100	CKCH	970	500	CKOT	1510	10000
CFLN	1230	1000	Amherst			CKLH			CKLW	1380	10000	CKOY	1310	50000	Timmins		
Grand Bank			CKDH	900	1000	CKWS	960	10000	Kirkland Lake			Owen Sound			CFCL/Fr	620	10000
CKYQ	610	10000	Antigonish			CKKL			CKJL	560	5000	CFOS	560	5000	CKGB	730	10000
Grand Falls			CJFX	580	10000	CKKW			Kitchener			Parry Sound			Toronto		
CBT	540	10000	Bridgewater			CKKY			CHYM	570	10000	CFBO	1340	250	CBL	740	50000
CIYQ	680	10000	CKBW	1000	10000	CFTJ	960	1000	CHYR	1090	10000	Pembroke			CFRB	1010	50000
CKCM	620	10000	Dartmouth			CFCT			CKYR	710	10000	CHOV	1350	1000	CFTR	680	50000
Happy Valley			Digby			CFCH			CKYR			Peterborough			CHIN/Multi	1540	50000
CFGB	1340	1000	Halifax			CFCO	630	10000	CKYR			CHEX	980	10000	CHUM	1050	50000
Harbour Grace			CBH	860	10000	Cobourg			CKYR			Port Elgin	1420	10000	CJBC/Fr	860	50000
CKYQ	970	1000	CHNS	960	10000	CHUC	1450	10000	CKYR			CFPS	1490	1000	CJCL	1430	50000
Marystown			CJCH	920	25000				CKYR			Red Lake			CKEY	590	10000
CHCM	560	10000							CKYR			CKRE	1340	250	Trenton		
Musgravetown									CKYR						CJTN	1270	1000
CHYO	670	10000							CKYR								

Wawa			Disraeli			Mont Laurier			CHLT/Fr	630	10000	CKKR	1330	10000	Agusascalientes		
CJWA	1240	1000	CJLP	1230	1000	CKML	610	1000	CJRS/Fr	1510	10000	Lloydminster			XEAC	1400	500
Welland			Doibea			Montmagny			CKTS/Eng	900	10000	CKSA	1080	10000	XEAGA	1590	250
CHOW	1470	10000	CHVD	1230	10000	CKBM/Fr	1490	1000	Sorel			Meadow Lake			XEBI	790	1000
Windsor			Drummondville			Montreal			CJSO/Fr	1320	10000	CJNS	1240	1000	XEDC	1080	250
CBE	1550	10000	CHRD/Fr	1480	10000	CBF	690	50000	St Eleuthere			Melfort			XENM	1320	250
CBEF/Fr	540	2500	Forestville			CBM	940	50000	CHRT/Fr	1450	250	CJVR	1420	10000	XERO	1490	250
CKLW	800	50000	CFRP	620	1000	CFCF	600	5000	St Georges De Beauce			Moose Jaw			XEUAA	1370	500
CKWW	580	500	Granby			CFMB	1410	10000	CKRB/Fr	1460	10000	CHAB	800	10000	XEUVA	1170	1000
Wingham			CHFF	1450	10000	CHRS/Fr	1090	10000	St. Hyacinthe			North Battleford			XEYZ	1450	250
CKNX	920	15000	Hauterive			CJAD	800	50000	CKBS/Fr	1240	250	CJNB	1050	10000	Calvillo		
Woodstock			CHLC	580	5000	CJMS	1280	50000	St Jovite			Prince Albert			XECAA	1020	1000
CKDK	1340	1000	CH			CKAC	730	50000	CKSS/Fr	1400	1000	CKBI	900	10000	Pebellon		
PRINCE EDWARD ISLAND			CBOF	1270	50000	CKGM	980	10000	St Pamphile			Regina			XEPLA	860	4000
Charlottetown			CJRC	1150	50000	CKLM	1570	50000	CHAL/Fr	1350	1000	CBK	540	50000	BAJA CALIFORNIA		
CFCY	630	10000	CKCH	970	10000	CKO	1470	10000	Ste Agathe Des Monts			CJME	1300	10000	Ensenada		
CHTN	1190	10000	Joliette			CKVL	850	50000	CJSA/Fr	1230	1000	CKCK	620	10000	XEDX	1010	500
Summerside			CJLM	1350	10000	New Carlisle			Ste. Anne Des Monts			CKRM	980	10000	XEEP	1500	500
CJRW	1240	250	Jonguere			CHNC	610	10000	CJMC/Fr	1490	1000	Rosetown			XEHC	920	2500
QUEBEC			CKRS	590	10000	Plessville	1420	10000	Ste Marie De Beauce			CKKR	1330	10000	XEPF	1400	250
Alma			L'Annoneiation			CKTL			CJVL/Fr	1360	10000	Saskatoon			XESCT	1230	1000
CFGT/Fr	1270	10000	CKLR	1490	2000	Pohenegamook			Terrescaming			CBKF	860	10000	XESS	1450	1000
Amos			La Pocatiere			CHRT	1450	1000	CKVT/Fr	1340	1000	CFQC	600	10000	Guerrero Negro		
CHAD/Fr	1340	1000	CHGB	1310	10000	Port Cartier			Thetford Mines			CJWW	1370	10000	XEZO	1070	1000
Amqui			La Sarre			CIPC	710	1000	CKLD/Fr	1330	10000	CKOM	1250	10000	Mexicali		
CFVM/Fr	1220	5000	CKLS	1240	1000	Quebec			Three Rivers			Shaunavon			XEAA	1340	1000
Asbestos			La Tuque			CBV	980	5000	CHLN/Fr	550	10000	CJSN	1490	1000	XEAO	910	250
CJAN/Fr	1340	1000	CFLM	1240	1000	CFLS	920	10000	CJTR	1140	10000	Swift Current			XECL	990	5000
Baie Comeau			Lachute			CHRC	800	50000	Val D' Or			CKSW	570	10000	XED	1050	10000
CHLC/Fr	580	5000	CJLA/Fr	630	1000	CJRP	1060	50000	CKVD	900	10000	Weyburn			XEHG	1370	500
CKBH/Fr	790	1000	Laval			CKCV	1280	50000	Valleyfield			CFSL	1190	10000	XEKC	1590	10000
Cabano			CKLM	1570	50000	Rimouski			CFLV	1370	10000	Yorkton			XEMBC	1190	250
CJAF/Fr	1240	1000	Lac-Etchemin			CJBR	900	10000	Verdun			CJGX	940	10000	XERM	1150	1000
Chapais			QIRB	1240	1000	Riviere Du Loup			CKVL	850	50000	YUKON TERRITORY			XESU	790	1000
CFED	1340	250	Lac-Megantic			CJFP	1400	10000	CFDA	1380	10000	Whitehorse			XEWV	940	1000
Chibougamau			CKFL	1400	1000	Roberval			Ville Marie			CFWH	570	1000	XEFZ	850	250
CHIB/Fr	1600	40	Levis			CKHL	910	10000	CKVM/Fr	710	10000	CKRW	610	1000	Rosario		
CJMD	1240	1000	CFLS	920	10000	Rouyn			SASKATCHEWAN			MEXICO			XEPRS	1090	50000
Chicoutimi			Longueuil			CKRN	1400	1000	Estevan			AGUASCALIENTES			Tecate		
CBJ/Fr	1580	50000	CHRS	1090	10000	Seven Islands			CJSL	1280	10000	XEHA			XEKT	1380	250
CJMT	1420	10000	Maniwaki			CKCN/Fr	560	10000	Gravelbourg			Tijuana			XEBBC	1470	5000
Degelis			CKMG	1340	1000	Shawinigan			CFRG/Fr	690	5000	XEBG			1550	1000	
CFVD/Fr	1370	1000	Matane			CKSM/Fr	1220	10000	Kindersley								
			CBGA	1250	10000	Sherbrooke											
			CHRM	1290	10000												

XEC	1310	250	Arriaga			CHIHUAHUA			XEDCH	1540	1000	XEPQ	710	5000	ZEZR	860	1000
XEAL	1270	5000	XEGJ	1190	250	Camargo			XEHM	1470	1000	Nueva Rosita			COLIMA		
XEGM	950	10000	XEMG	1250	1000	XEACC	1520	1000	XEJK	1340	1000	XEABA	1300	1000	Armeria		
XEMMM	800	500	Chiapa De Corzo			XECC	960	250	Jimenez			XEARO	1400	1000	XELS	1360	1000
XEMO	860	5000	XEVV	920	5000	XEPCD	1440	5000	XEJZ	1320	1000	XENR	980	5000	Colima		
XETRA	690	50000	Cintalapa			XEOH	1270	1000	Meoqui			XEPD	1460	1000	XECOC	1430	1500
XEXX	1420	2000	XEIN	810	1000	Chihuahua			XEBZ	1590	1000	XEYJ	950	10000	XEDS	1470	5000
BAJA CALIFORNIA SUR			Comitan			WEBU	620	5000	Nuevo Casas Grandes			Parras			XERL	710	10000
Ciudad Morelos			XEUI	1320	1000	XEBW	1280	1000	XETX	1010	1000	XEAY	1470	1000	XEUU	1280	500
XEDY	1080	500	Hidalgo			XEDG	1490	1000	Ojinaga			XEJQ	1500	250	XEVE	1040	250
XEMCA	1480	500	XEZW	1380	1000	XEDI	1360	1000	XEOG	1260	1000	Piedras Negras			Manzanillo		
Ensenada			XEHL	1110	1000	XEES	1110	1000	XEQU	1450	1000	XEIK	1360	500	XEAL	860	5000
XEHC	1590	1000	XEKY	1280	1000	XEFA	950	500	XERCH	1340	1000	XEMJ	920	1000	XECS	960	1000
La Paz			XEMK	1490	500	XEFI	580	5000	Parral			XEMU	580	5000	XEMAC	1330	500
XEHZ	990	1000	Palenque			XEFO	680	1000	XEAT	1250	250	XEVM	1240	250	Tecoman		
ZELPZ	1310	10000	XEPAC	600	500	XELO	1010	1000	XEGD	1400	1000	Sabins			XETY	1390	5000
ZENT	790	5000	Pichucalco			XEM	850	5000	XEJR	1490	1000	XEBX	610	3000	DISTRITO FEDERAL		
ZEPAB	1380	250	XEOB	1080	1500	XEQD	920	1000	XEJS	1150	1000	XESC	1250	1000	Mexico City		
San Jose Del Cabo			San Cristobal			XERPC	790	5000	San Francisco, Del Oro			XEAJ	1330	500	XEAI	1440	5000
XEKA	1420	250	XERA	760	5000	XERU	1310	1000	XEHB	770	500	XEDE	1400	500	XEB	1220	100000
Santa Rosalia			XEWM	640	1000	XEV	1390	1000	Santa Brbara			XEIM	810	500	XEBS	1410	5000
XESR	1320	500	Tapachula			Ciudad Juarez			XESB	820	750	XEKS	960	500	XECMQ	1320	10000
Todas Santos			XEKQ	680	5000	XECJC	1490	1000	Zaragoza			XESAC	1580	250	XECO	1380	5000
XEIB	1490	250	XEOE	810	1000	XEF	1420	5000	XEJPV	1560	1000	XESHT	1430	500	XEDA	1290	10000
Villa Constitucion			XETAK	1100	750	XEFV	1000	1000	COAHUILA			XESJ	1250	1000	XEDF	970	10000
XEVSD	1440	1000	XETAP	1310	1000	XEJ	970	10000	Allende			San Pedro			XEEP	1060	50000
CAMPECHE			XETS	630	1000	XEP	1300	1000	XEIA	1430	1000	XEBF	1150	1000	XEFR	1180	1000
Beacal			Tonalá			XEPZ	1190	1000	XEIV	1380	5000	XEOT	980	500	XEJP	1150	10000
XEBAL	1470	1000	XEDB	1290	5000	ZEROK	800	150000	Ciudad Acuna			Torreón			XEL	1260	10000
Campeche			Tuxtla			XEWG	1240	250	XEAE	1600	5000	XELZ	1600	1000	XELA	830	10000
XEA	1370	1000	XEDG	1300	1000	XEWR	1110	500	XEDH	1340	1000	ZEQN	1310	10000	XEMP	710	1000
XECAM	1280	500	XEIO	840	10000	XEYC	1460	1000	XEDK	1010	500	XETAA	920	5000	XEN	690	20000
XECUC	840	500	XELM	1240	1000	XEZOL	860	1000	XERF	1570	250000	XETB	1350	5000	XENK	620	10000
XERAC	1430	250	XEON	710	3000	Ciudad Madero			Francisco I. Madero			XETC	1240	500	XEOC	560	1000
Carmen			XESX	1390	5000	XESW	1300	1000	XEYD	1410	1000	XETJ	570	1000	XEOY	1000	10000
XEBCC	1340	250	XETG	990	10000	Cuahutemoc			Matamoros			XEVK	1010	5000	XEPH	590	5000
XEIT	1070	1000	Champoton			XEDP	710	5000	XETOR	670	1000	Villa Frontera			XEQ	940	150000
XEMAB	950	250	XESE	1560	5000	XEDT	1080	1000	Monclova			XEOP	920	1000	XEQK	1350	1000
XEUJ	1460	250	Escroega			XEEA	1130	1000	XEMDA	1170	500	XEXU	1480	1000	XEQR	1030	10000
XEESC	820	750	XEUD	1360	1000	XEER	990	1000	XEMF	1260	1000	Villa Union			XERC	790	10000
Palizada			XEUE	580	1000	XEPL	550	500	XEPU	1110	250	XEVUC	1520	1000	XERED	1110	50000
XETH	1290	250	Villa Flore			XEQZ	1560	750	XEQX	970	500	Zaragoza			XERH	1500	20000
CHIAPAS			XEVF	1540	500	Delicias			XEWQ	1330	1000	ZEZR	850	1000	XERPM	660	50000
			Yajalon			XEACB	660	500	Muzquiz								
			XEYS	1350	500	XEBN	1240	1000									

XESM	1470	10000	XEUG	970	500	XECI	1340	1000	JALISCO			Sayula			Huetamo		
XEUN	860	45000	Irapuato			XEKJ	1400	500	Ameca			XEWP	1420	500	XEKN	1490	250
XEUR	1530	3000	XEAMO	870	1000	XEKU	710	500	XEED	1490	1000	Tala			Jiquilpan		
XEVOZ	1590	10000	XEBO	1330	5000	XERY	1450	1000	Atemajac			XECX	1040	250	XEIX	1290	1000
XEW	900	250000	XECN	1080	1000	XEVMA	1430	1000	XEKB	1410	8000	Tamazula			La Piedad		
XEX	730	100000	XEIRG	1590	250	XEVP	1030	1500	Autlan			XEQJ	1400	1000	XELC	980	5000
DURANGO			XEWE	1420	10000	Atoyac			XELD	780	5000	Tepatitlan			XELP	1170	250
Durango			XEYA	1470	1000	XERAA	1240	500	XEQA	1600	1000	XEZK	1600	1000	Lazaro Cardenas		
XECAV	1470	1000	Leon			Chilpancingo			Ciudad Guzman			Tlaquepaque			XELAC	1560	5000
XECK	620	1000	XELEO	1110	5000	XECHG	1130	1000	ZEBE	990	1000	XEMIA	850	1000	XELCM	930	500
XEDGO	760	1000	XELG	680	10000	XELI	1580	1000	XEGUZ	550	200	XEPJ	1370	1000	XEOJ	1400	1000
XEDRD	1540	250	XERPL	1270	5000	Ciudad Altamirano			XEIS	670	5000	XESP	1070	5000	Los Reyes		
XEDU	860	1000	XERW	1390	10000	XEXY	1530	500	XELW	1510	5000	Tonala			XEABC	760	20000
XEE	590	1000	XERZ	1240	1000	Cozumel			El Grullo			XERAL	1440	5000	XEGO	1530	1000
XEHD	1270	250	XEX-1	710	500	XERB	1510	500	XEJY	1350	1000	XEZZ	760	5000	Morelia		
XERPU	1370	1000	XEXF	1140	5000	Iguala			Guadalajara			Zacoalco			XECGP	1520	500
XEWX	660	250	Moroleon			XEIG	1430	1000	XEAD	1150	1000	XEJTF	1450	250	XECR	1340	250
Gomez Palacio			XEBV	1100	500	XEKF	1360	1000	XEAV	580	10000	Zapopan			XEI	1400	1000
XEEP	1450	1000	XETN	700	250	XEYL	1170	50000	XEBA	820	10000	XETZ	880	10000	XEKW	1300	500
XEGZ	790	1000	Salamanca			Las Cruces			XEDK	1250	5000	ZEZJ	1480	500	XELIA	1140	250
XERS	1380	500	XEEMM	1210	250	XEKOK	750	10000	XEDKR	700	1000	MEXICO			XELQ	570	1000
XEWN	1270	500	XEMAS	1560	1000	Petalan			XEDKT	1340	1000	Atlacomulco			XELY	870	1000
GUANAJUATO			XESAG	1040	1000	XEHJ	1310	250	XEGAJ	1520	1000	XERLK	1340	500	XEMM	960	1000
Acambaro			XEZH	1260	500	Taxco			XEHK	960	1000	El Oro			XERPA	1240	500
XEAK	1600	500	Salvatierra			XEXC	1480	1000	XEHL	1010	50000	XEDV	1550	500	XESV	1370	500
XEVW	1160	1000	XEFAC	1380	2000	Tixtla			XEJB	630	5000	Ixtapan De La Sal			XEYM	810	1000
Apaseo Grande			XEMC	1480	250	XEPI	1250	1000	XELT	920	20000	XEXI	1400	250	Nueva Italkia		
XEAF	1580	1000	XERE	1290	1000	Tlapa			XEQP	1280	1000	San Rafael Chamapa			XENI	1320	1000
Arperos			San Francisco Del Rincon			XEZV	800	1000	XETIA	1310	5000	XEVIP	1560	50000	Patcuaro		
XEGTO	600	5000	XEAGN	910	100	Zihuatenejo			XEUJO	1120	500	Toluca			XEXL	1020	1000
Celaya			XEXV	1300	20000	XEUQ	960	1000	XEWK	1190	50000	XECH	1490	250	Purepero		
XEFG	840	1000	San Luis De La Paz			HIDALGO			La Barca			XEGEM	1600	2000	XERCP	1600	200
XEITC	1200	250	XEGX	1480	500	Huejutla			XELB	1090	250	XEGEM	930		Sahuayo		
XENC	1540	1000	San Miguel Allende			XECY	1320	1000	Agos			XEQY	1360	500	XEGC	1450	1000
XEY	1360	1000	XESQ	1280	500	Ixmiquilpan			XELJ	1030	1000	Valle De Bravo			Uruapan		
XEZN	780	500	Silao			XEQH	1270	1000	XEQZ	1540	1000	XEVAB	1580	250	XEFN	1130	1000
Cortazar			XESD	1530	1000	XEQZ	1390	700	Mascota			MICHOACAN			XEIP	1480	500
XEFY	950	500	GUERRERO			Mixquiahuala			XEMST	910	500	Apatzingan			XEIW	1160	1000
XEOF	1510	5000	Acapulco			XEXH	1390	100	XEMTJ	1430	1000	XEAPM	1380	1000	XEUF	610	5000
Dolores Hidalgo			XEACA	630	5000	Pachuca			Octolan			XECJ	970	5000	XEURM	1440	5000
XEJE	1370	500	XEACD	550	500	XEPK	1190	500	XEAN	800	1000	EML	770	1000	Zacapu		
Guanajuato			XEACG	1600	500	TULANCINGO			XENP	1430	1000	Ciudad Hidalgo			XEZI	1200	1000
XEFL	1500	1000	XEAGR	810	1000	XENO	1580	5000	Puerto Vallarta			XESOL	1190	500	XEZU	1270	1000
			XEBB	600	5000	XEOB	1340	250	XEEJ	740	1000				Zamora		
									XEPVJ	1110	1000				XEGT	1490	1000

XEQL	1580	1000	XELE	1400	250	Matias Romero			XEZT	1250	500	XEWO	1020	1000	El Fuerte		
XEZM	650	5000	XELN	790	1000	XEYG	660	250	San Martin						XEGU	1450	1000
Zitacuaro			XER	1260	1000	Oaxaca			XERTF	1600	500	SAN LUIS POTOSI			XEORF	950	5000
ZETA	600	500	Montemorelos			XEAX	1270	5000	Tehuacan			Cerritos			Escuinapa		
MORELOS			XEDD	1560	500	XECE	1240	500	XEATP	1520	250	XEZW	1560	500	XENH	870	1000
Cuernavaca			XERN	950	5000	XEIV	990	1000	XEGY	1070	1000	Ciudad Valles			XEQE	1340	250
XEIC	1540	1000	XESF	1320	1000	XEIV	1190	500	XEJCP	1600	250	XECV	610	1000	Guamuchil		
XEJC	1340	500	Monterrey			XEKC	1460	1000	XETE	1140	1000	XEIR	1410	1000	XEJL	1300	1000
XEWJ	1420	500	XEACH	1590	5000	XEOA	570	5000	XEWJ	1420	1000	XETR	1120	1000	Guasave		
Jojutla			XEAU	1090	2500	XERPO	710	1000	Tezultlan			XEVAL	1360	5000	XEGS	610	1000
XEDO	1190	1000	XEAW	1280	5000	XEUBJ	1400	1000	XEOL	990	1000	XEXR	1260	1000	XEORO	680	1000
Zacatepec			XEBJB	570	5000	XEZB	950	1000				Matehuala			XEVP	1490	500
XEART	1590	1000	XECT	1190	500	XEZYB	1530	500	QUERETARO			XEFF	1490	1000	Los Mochis		
			XEFB	630	10000	Pinotepa			Cozumel			XEIE	1450	1000	XECF	1410	1000
NAYARIT			XEFZ	740	500	XETEP	1450	500	XERB	1170	5000	XEWJ	1400	250	XECU	1470	1000
Acaponeta			XEG	1050	150000	Puerto Angel			Jalpan			Rio Verde			XECW	1340	1000
XELH	1400	1000	XEH	1420	1000	XPXP	1340	1000	XEJAQ	1040	250	XEEM	880	1000	XEHS	1280	250
Ahuacatlan			XEIZ	1240	500	Puerto Escondido			Queretaro			XEIV	1290	250	XEMOS	1130	500
XENAY	1400	1000	XEJM	1450	500	XEACC	870	500	XEJX	1250	1000	XETUN	1430	250	XEMV	770	2500
Compostelka			XEMN	600	500	Tehuantepec			XEKH	1020	500	San Luis Potosi			XEPNK	880	5000
XEEF	1130	1000	XEMON	1370	10000	XEJI	1390	2500	XENA	1450	1000	XEBM	920	5000	XETNT	650	500
Ixtlan			XEMR	1140	50000	XEKZ	610	1000	XEQG	980	1000	XECZ	960	500	Mazatlan		
XERIO	1560	5000	XENL	860	5000	XEUC	550	1000	XEW-2	900	1000	XEEI	1070	250	XEACE	1470	1000
XEVR	1030	250	XENV	1340	1000	Tuxtepec			XEXE	1490	1000	XEEQ	760	250	XENX	1290	10000
Ruiz			XEOK	920	1000	XEUH	1320	1000	San Juan Del Rio			XEPO	1310	500	XEOW	970	5000
XESK	1490	250	XEQI	1510	10000	XEXP	1150	500	XEVI	1400	1000	XESL	1340	500	XERJ	600	5000
Santiago Ixcuintla			XERG	690	500	PUEBLA			Villa De La Corregidora			XESMR	1380	1000	XEST	1580	250
XESI	1240	1000	XET	990	50000	Atlixco			XEHY	1310	5000	XEWA	540	150000	SETK	630	1000
XEZE	1340	250	XEVV	1310	1000	XEXD	1450	500	Villa Del Pueblito			XEXQ	1460	1000	XEVU	1350	850
Tecuala			XEWA-1	540	500	Cholula			XEGV	1120	500	Tamazunchale			XEW-1	900	5000
XETD	1450	250	Sabina Hidalgo			XESZ	1520	250	Villa Juarez			XEGI	1160	500	Navolato		
Tepic			XESH	1400	1000	Cuidad Serdan			XEVJP	570	250	XEGK	770	1000	XEVQ	830	1000
XENF	680	250	Santa Catarina			XELU	1340	250	QUINTANA ROO			SINALOA			Rosario		
XEOO	620	1000	XESTN	1540	5000	Huachinango			Cancun			Culiacan			XEHW	1440	1000
XEPNA	1590	250	Villa De Guadalupe			XENG	1240	1000	XECCQ	1480	250	XEBL	710	5000	San Blas		
XERK	710	1000	XETKR	1480	5000	Izucar De Matamoros			XEYI	580	500	XECQ	920	5000	XEIF	1240	1000
XETCY	840	500	OAXACA			XEEV	1330	500	Carillo Puerto			XECST	1590	250	SONORA		
XETNC	550	10000	Huajuapán De Leon			XEFS	1400	350	XECPQ	1460	1000	XEEH	1400	1000	Agua Prieta		
XEXT	980	1000	XEOU	1480	500	Puebla			XEKX	620	1000	XENW	860	1000	XEAQ	1490	1000
Tuxpan			Ixtepec			XECD	1170	1000	Chefumat			XENZ	570	1000	XEFH	1310	1000
XEUX	810	10000	XECA	1430	1000	XEHIT	1310	500	XEQAA	560	200	XESA	1360	1000	Carborca		
			Juchitan			XEHR	1090	500	XEROO	960	1000	XEUAS	1260	5000	XEANA	1280	500
NUEVO LEON			XEAH	1330	500	XEPA	1370	5000	XEUO	1250	250	XEWS	1010	5000	XEEZ	970	500
Linares			Loma Bonita			XEPOP	1490	500				XEWT	1200	1000	XEIB	1170	250
			XELOM	1470	5000												

XESN	1250	500	XENAS	1400	500	KEKV	740	1000	XENU	1550	5000	XEGB	960	1000	XEMCA	1090	5000
XEUK	1470	500	XENS	1480	1000	XETAB	1410	5000	XEWL	1090	1000	XEOM	1340	1000	XEPAV	1540	1000
Cananea			XESON	1110	1000	XEUUV	1500	500	Reynosa			XEZS	1170	500	Papantla		
XEFO	980	500	Nogales			XEVA	790	10000	XEFD	590	5000	Cordoba			XEEU	1170	250
Ciudad Obregon			XECG	1240	1000	XEVT	970	5000	XERI	810	500	XEAG	1280	1000	XEPV	1270	1000
XEAP	1290	1000	XEHF	1370	5000	TAMAULIPAS			XERKS	940	200	XEDZ	580	1000	Perote		
XEHO	910	1000	XEHN	1130	1000				XERT	11709	5000	XEVC	700	500	XEBD	1100	1000
XEQI	960	1000	XENY	1270	1000				Rio Bravo			Cosamaloapan			XEBE	1160	1000
XEOBS	1370	10000	XEPE	1600	1000	Altamira			XEFD	590	5000	XEFU	630	5000	Poza Rica		
XEOS	1340	250	XEVN	1190	500	Camargo	1460	5000	XEGH	620	250	XEQO	980	5000	XEGP	1540	1000
XEOX	1430	5000	XEXW	1300	5000	XEZD	1350	250	XEOQ	1110	1000	XEYB	1380	1000	XEJD	1450	1000
XERSV	810	5000	Puerto Penasco			Ciudad Madero			Tampico			Fortin De Las Flores			XEPR	1480	10000
XESO	1150	5000	XEQC	1390	500	XEMTS	1590	1000	XEAR	1490	250	XEKG	820	1000	XEPW	1200	250
Empalme			San Luis			XERP	1330	10000	XEFW	810	50000	Gutierrez Zomora			XEXK	1080	500
XEPE	1450	250	XECB	1450	250	XERRT	1270	250	XELE	1300	1000	XEGF	1420	500	San Andres Tuxtla		
XEPS	710	1000	XEEH	1520	1000	Ciudad Mante			XES	1240	1000	Huatusco			XEDQ	1360	1000
Esperanza			XELBL	1350	500	XECM	1450	1000	XETO	1400	1000	XEYV	1180	1000	XEGA	1300	500
XEEB	1010	500	XEMW	1260	1000	XEGG	1490	250	XETOT	1190	5000	Jalapa			San Rafael		
Guaymas			Santa Ana			XEMY	840	1000	XETU	980	10000	XEJA	610	1000	XEVO	1520	250
XEBQ	1240	1000	XEAB	1400	1000	XEXO	1390	5000	XETW	860	500	XEJH	1460	500	Teocelo		
XEDR	1490	1000	Topolobampo			Ciudad Miguel Aleman			Valle Hermosa	1450	1000	XEKL	550	1000	XEYT	1490	250
XEFX	630	1000	XEZA	740	250	XEHI	1470	1000				XEOZ	960	1000	Tierra Blanca		
XEGYS	1560	250	Ures			XEWD	1430	2000				XERUV	1550	10000	XEJF	1350	1000
Hermosillo			XEXN	1010	500	Ciudad Victoria			TLAXCALA			XEZL	1130	10000	XETBV	1580	1000
XEBH	920	5000	Villa De Seris			XEBJ	970	1000	Huamantla			Jaltipan			Tlapacoyan		
XEDL	1250	1000	XEVS	1110	1000	XEGW	1380	5000	XEHT	810	500	XEJV	1420	1000	XEEC	1440	250
XEDM	1580	50000	XEVSS	1340	1000	XEHP	580	1000	Panzacola			Las Choapas			Tuxpan		
XEHOS	1540	5000	TABASCO			XERCM	1410	1000	XEEG	1280	1000	XEUY	1580	250	XEBY	1340	250
XEHQ	590	1500				XERP	1340	1000	TLaxcala			Martinez De La Torre			XETL	1390	5000
XELV	680	250				XETAM	1550	500	XETT	1430	800	XEFB	1360	500	XETVR	1150	250
XEPB	1400	500	Cardenas			El Limon			VERACRUZ			XEHU	1300	5000	Veracruz		
XEUS	850	1000	XEJAC	1110	1000	Matamoros			Acayucan			XEUZ	1330	1000	XEFM	1010	5000
XEYH	1170	1000	Comalcalco			XEYP	1520	1000	XEVZ	1490	1000	Minatitlan			XEHV	1310	1000
Huatabampo			XEVX	570	1000	XEAM	1310	1000	Alamo			XEXM	1450	500	XELL	1430	5000
XEYO	560	1000	Huimanguillo			XEEW	1420	1000	XEID	1230	250	XEMI	1070	500	XEPG	1400	250
Magdalena			XEZQ	1520	1000	XEMS	1490	1000	Alvarado			XEMTV	1260	1000	XEQT	1600	500
XEDJ	1450	250	Muacuspana			XEMT	1340	1000	Boca Del Rio			Misantla			XETF	1250	1000
XESY	1320	200	XEBR	1020	1000	XEMV	1000	500	XEOD	1090	1000	XEPT	1590	1000	XEU	930	5000
Nacozari			XENB	660	1000	XEO	970	1000	Ciudad Mendoza			Nadlingo			XEWB	900	50000
XENAZ	1600	1000	XERTM	1150	1000	Nuevo Laredo			XEAGV	1360	250	Orizaba			YUCATAN		
XETM	1350	1000	Teapa			XEAS	1410	1000	Coatepec			XEOV	1240	250	Merida		
Navojua			XEYR	880	9000	XEBK	1340	500	XEGR	1040	1000	XEPP	1450	1000	XEFC	1330	5000
XEGL	1270	1000	Tenosique			XEFE	790	1000	Coatzacoalcos			XETQ	850	100000	XEMH	970	1000
XEKE	980	1000	XEZX	860	1000	XEGNK	1370	250				Panuco			XEMQ	1240	1000
XEKI	1510	500	Villahermosa			XEK	960	5000									
			XEACM	620	5000												

XEPY	1450	1000
XEQW	550	2000
XERRF	1150	1000
XERUY	1390	10000
XEVG	650	250
XEZ	600	5000
Motul		
XEYK	1540	1000
Progreso		
XETRN	690	50000
XEUL	1360	500
Tizimin		
XEUP	1310	1000
Uman		
XEYW	1270	2500
Valladolid		
XECP	1590	10000
XEME	1490	500
XEUM	990	1000
ZACATECAS		
Fresnillo		
XEEL	610	1000
XEIH	930	5000
XEMA	690	5000
XEQS	980	1000
XEQQ	1510	1000
Jalapa		
XEEY	1420	250
XEFP	1230	2000
Jerez		
XEXM	1360	1000
Loreto		
XELTZ	740	5000
Rio Grande		
XEHE	1450	500
XEJC	810	1000
Zacatecas		
XELK	1280	250
XEPC	1240	1000
XEUA	830	1000
XEXZ	1150	1000
XEZA	1120	250
Zapopan		
XEBBB	1040	5000

This data as of June 1982.

SHORT WAVE BROADCAST

Since shortwaves can be reached further than medium waves, they are used by most broadcast stations for foreign broadcasts.

- **AFGHANISTAN** ————— ● Country
- Radio Afghanistan ————— ● Station
- P.O. Box 544, Kabul ————— ● Address
- This is Radio Afghanistan ————— ● Station Identification

*Frequencies and broadcast schedule have been chosen for relatively favorable reception in the U.S.A. but condition of reception will vary according to regions, and frequencies may change without notice due to various reasons within a particular station.

Furthermore, frequencies for English Programs of VOA and AFRTS are indicated for respective regions to enable reception while abroad.
Time is G.M.T. Frequency is in kHz.

EXPLANATORY NOTES

A	Arabic	Ch	Chichewa	Ga	Gala	J	Japanese	Ma	Maldivian	S	Spanish
Af	Afar	Co	Comorian	Gr	Greek	Ka	Kashmiri	Mr	Maori	Sa	Sango
Am	Amharic	Da	Danish	H	Hindi	Ki	Kirundi	N	Norge	Sw	Swahili
Az	Azerbaijavian	Du	Dutch	I	Italian	Ky	Kinyarwanda	P	Portuguse	Ta	Tadzhik
Bi	Bislama	E	English	lc	Iceland	La	Lao	Pe	Persian	Tu	Turkish
By	Byelorussian	F	French	In	Indonesian	Lt	Latvian	Pi	Pidgin English	Ur	Urdu
C	Chinese	G	German	K	Kiribertese	M	Malay	R	Russian	V	Vernacular

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

ANGOLA

- Radio Nacional de Angola
- C.P. 1329, Luanda.
- "De Luanda capital da Republica Popular de Angola transmite a Radio Nacional"

9535
9660
11955
F E

9535
9660
11955
F E

ANTARCTICA

- American Forces Antarctic Network
- AFAN McMurdo, US Naval Support Force Antarctica, Fleet Post Office, San Francisco, CA 96601 U.S.A.

6012
E

ANTIGUA

- BBC Caribbean Relay Station

9510
E

6175
E

6195
11775
E

6175
E

ARGENTINA

- Radiodifusora Argentina al Exterior (RAE)
- Ayacucho 1556 1112 Buenos Aires.
- "This is RAE Calling"

(not Mon.)

6060
11710
15345

P S E G P E S F G E

J E J E S

11710

(not Sun.)

15345

A E G S F A G E I F

(not Sun.)

		UTC(GMT)																																																																																																																																																																																			
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																																																																																																																																																											
AUSTRALIA																																																																																																																																																																																					
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BELGIUM

- Belgian Radio B-1000
- P.O. Box 26, 1000 Brussels.
- "This is the Belgian Radio and Television Overseas Service"
"This is Brussels, the international Service of the Belgische Radio en Televisie, the radio network of the Dutch speaking community in Belgium."

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BELIZE

- Radio Belize
- P.O. Box 89, Belize City
- "This is Radio Belize, Voice of the New Central American Nation of Belize in the Heart of the Caribbean Basin"

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3300

BHUTAN

- Radio National Youth Association of Bhutan (NYAB)
- P.O. Box 1, Thimphu

7040
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BENIN

- Office de Radiodiffusion et de Television du Benin
- B.P. 366, Cotonou.
- "Ici la Voix de la Revolution Béninoise, Office de Radio-diffusion, et de Television du Benin, emettant de Cotonou"

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BOLIVIA

- La Cruz del Sur
- Cajon 1408, La Paz.
- "CP27 y CP75, La Cruz del Sur"

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Mon-Fri

- Radio Progreso
- Casilla 4342, La Paz.

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6005
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- Radio Panamericana
- Casilla 5263, La Paz.

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4105
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BOTSWANA

- Radio Botswana
- P.O. Box 0060, Gaborone.
- "This is Radio Botswana, broadcasting from Gaborone"

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BRAZIL

- Radio Nacional de Brasilia.
- P.O. Box 1620, Brasilia.
- "You are turned to the International service of Radio Nacional de Brasilia"

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17830
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15280
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BULGARIA

- Radio Sofia
- 4 Bd. Dragan Tsankov, Sofia.
- "This is Sofia, Bulgaria Calling"

9700
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15110
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11765
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9700
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15110
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17865
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9700
15110
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11735
15310
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15110

BURMA

- Burma Broadcasting Service
- Prome Road, Kamayut P.O., Rangoon.
- "This is the Burma Broadcasting Service" "Thima Myanma Athan Hma Hlwint Nay Barthe"

7185
E

9730
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5985
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BURUNDI

- La Voix de la Revolution
- B.P. 1900, Bujumbura
- "Ici Bujumbura, Radiodiffusion Nationale de la Republique du Burundi la Voix de la Revolution"

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UTC(GMT)

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CAMEROON

- Radio Yaounde
- B.P. 281, Yaounde.
- This is Yaounde, the National Broadcasting System of the United Republic of Cameroon" "Ici Yaounde. Radiodiffusion de la Republique Unie du Cameroon"

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CAMBODIA

- Voice of the Kampuchean people
- "This is the Voice of the Kampuchean people"

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CANADA

- Radio Canada International
- P.O. Box 6000, Montreal Canada H3C 3A8.
- "This is Radio Canada International"

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CANARY ISLANDS

- Radiodifison Nacional de España
- San Martin 1, Santa Cruz de Tenerife
- "Radiodifusion Nacional de España en Canarias, Centro Emisor del Atlantico"

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CAPE VERDE

- Radio Voz de São Vicente
- C.P. 29 Mindelo S. Vicente

3930
P**CENTRAL AFRICAN REPUBLIC**

- La Voix de Republique Centrafricaine
- B.P. 490, Bangui
- "Ici la Voix de Republique Centrafricaine qui émet de Bangui"

5035
F Sa5035
F Sa7220
F Sa**CHILE**

- Voice of Chile
- P.O. Box 244V, Santiago
- "This is the Voice of Chile"

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S9550
S6150
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15140 15140
E E**CHAD**

- Radiodiffusion Nationale Tchadienne
- B.P. 892 N'djamena
- "Ici N'djamena Radiodiffusion National Tchadinne emettant dans les bandes"

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CONGO

- Radiodiffusion Television Congolaise
- B.P. 2241, Brazzaville
- "Ici la Voix de la Revolution Congolaise, Station Nationale de la Radiodiffusion"

E P F V

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61156115
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6115**COOK ISLANDS**

- Cook Islands Broadcasting and Newspaper Corporation
- P.O. Box 126, Avarua, Rarotonga
- "This is Radio Cook Islands Calling"

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9695
11760
E Mr9695
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E Mr11760
E Mr**COSTA RICA**

- Faro del Caribe
- Apt 2710, San Jose.
- "This is TIFC, the Lighthouse of the Caribbean in San Jose, Costa Rica"

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6175
9615
9645**CUBA**

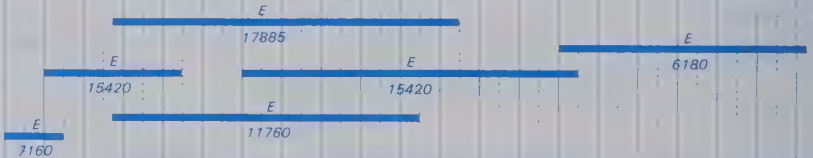
- Radio Havana Cuba
- Apartado 7026, La Havana.
- "This is Radio Havana Cuba, transmitting from Cuba"

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CYPRUS

- BBC East Mediterranean Relay Station



CZECHOSLOVAKIA

- Radio Prague
- Prague 2, 12099 Vinohradska, 12.
- "This is Radio Prague, Czechoslovakia"



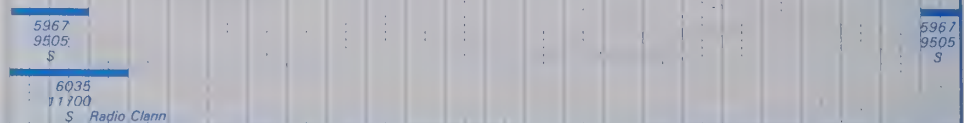
DENMARK

- Radio Denmark
- Radio House Rosenorns Alle 22 1999, Copenhagen.
- "This is Radio Denmark"



DOMINICAN REPUBLIC

- Radio TV Dominicana
- Apt, 965, Santo Domingo.
- "Radio Television Dominicana, des de Santo Domingo"

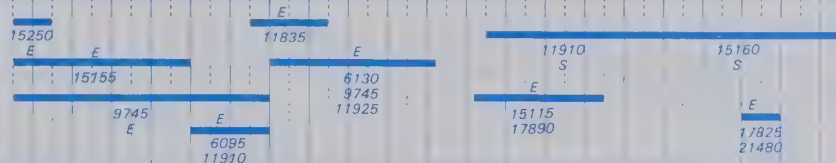


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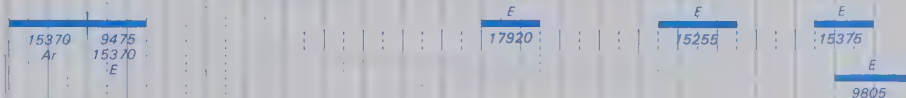
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ECUADOR

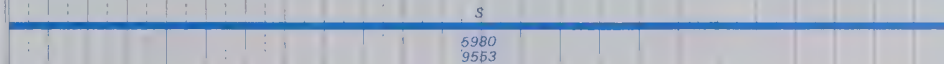
- Voice of the Andes (HCJB)
- Casilla 691, Quito.
- "This is the Voice of the Andes, HCJB, Quito, Ecuador"

**EGYPT**

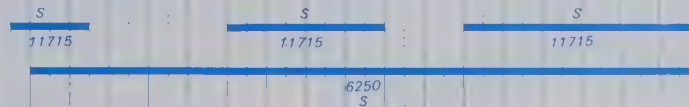
- Radio Cairo
- P.O. Box 1186, Cairo.
- "This is Radio Cairo" "Hunal El Kahira"

**EL SALVADOR**

- Radio El Salvador
- Parque Venustiano, Carranla, San Salvador

**EQUATORIAL GUINEA**

- Radio Malabo
- Apt. 195, Malabo, Isla Bioko
- "Esta es Radio Malabo, emisora en la capital de la Republica Libre de Guinea Ecuatorial"



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ETHIOPIA

- Voice of Revolutionary Ethiopia
- P.O. Box 654, Addis Ababa.
- "This is the National Service of Voice of Revolutionary Ethiopia, Broadcasting from Addis Ababa"

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9595

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E**FALKLAND ISLANDS**

- Falkland Island Broadcasting Station
- Broadcasting Studios, Stanley
- "This is the Falkland Islands Broadcasting Station"

2370
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E**FINLAND**

- Radio Finland
- PL95 SF-00251, Helsinki, 25
- "This is Radio Finland Helsinki"

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21475
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15400E
15265
15430E
11755
15270**FRANCE**

- Radio France International
- B.P. 9516, 75762 Paris Cédex 16
- "Ici Paris, Radio France Internationale"

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GHANA

- Radio Ghana
- P.O. Box 1633, Accra.
- "This is the External Service of Radio Ghana"

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GREECE

- Voice of Greece
- P.O. Box 19, Aghia Paraskevi, Attikis Athens.
- "This is Athens, You are listening to the Voice of Greece"

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9865
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15055
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GREENLAND

- Radio Greenland
- P.O. Box 1007, DK-3900 Godthab.
- "You are Listening to Radio Greenland"

3999
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GRENADA

- Radio Free Grenada
- P.O. Box 34, Morne Rouge, St. George's, Grenada.
- "This is Radio Free Grenada"

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GUAM

- Trans World Radio
- P.O. Box CC, Agana, Guam 96910
- "This is the Voice of Trans World Radio, Pacific, KTWR"

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E**GUATEMALA**

- La Voz de Guatemala
- Calle 18, 6-72, Z-1, Guatemala.
- "TGW La Voz de Guatemala"

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S6180
S**GUINEA-BISSAU**

- Radiodifusão Nacional
- C.P. 191, Bissau
- "Escutar a Radiodifusão Nacional de Republica de Guine-Bissau"

5041
P**REPUBLIC OF GUINEA**

- Radiodiffusion Nationale
- B.P. 391, Conakry.
- "Ici Conakry, Radiodiffusion Nationale"

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4910 6155 7125

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UTC(GMT)

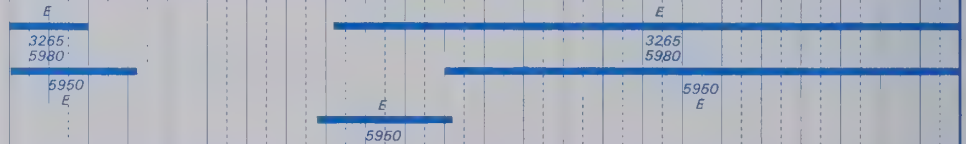
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GUYANA (French)

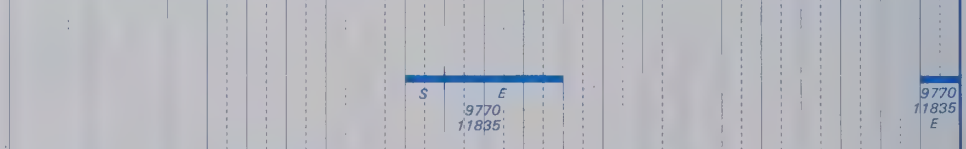
- France Regions 3
- B.P. 336, 97305, Cayenne
- "Ici Cayenne, France Regions, Société Nationale de Programmes"

**REPUBLIC OF GUYANA**

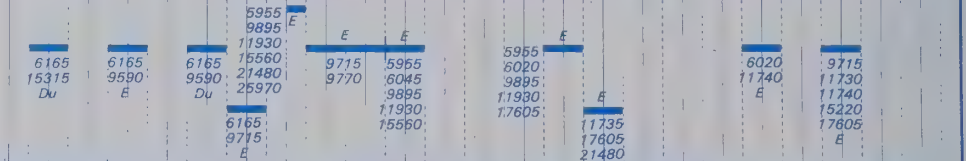
- Guyana Broadcasting Service
- P.O. Box 560, Georgetown
- "This is Action Radio, GBS"

**HAITI**

- Radio Station 4EVH
- B.P. 2002, Port-au-Prince

**HOLLAND**

- Radio Nederland
- P.O. Box 222, 1200JG, Hilversum.
- "This is Radio Nederland, the Dutch World Broadcasting System" "Hier is Radio Nederland Wereldomroep in Hilversum"



UTC(GMT)

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HONDURAS

- La Voz Evangelica
- Ap. 145C, Tegucigalpa.

4820
S4820
E4820
S**HUNGARY**

- Radio Budapest
- Brody Sandor 5-7, H-1800 Budapest.
- "This is Radio Budapest, Hungary"

6025
9585
9835
11910
12000
15220

E

E

E

E

9835 6025
11910 7155
15160 9585
15220 9835
17710 11910
21525 15160

E

6025
7225
9585
9835
11910
12000

E

E

6025
6110
9585
9835
11910
12000**ICELAND**

- Iceland State Broadcast Service
- P.O. Box 120, Reykjavik

13797(SSB)
IC.**INDIA**

- All India Radio
- Post Box 500, New Delhi, 110001
- "This is All India Radio"

E
17790

E

15285
15320
17387
17705
17875
21695

E

11810
15335

45

E

7205 9665 11755
9595 9755 15110
11620 15265

E

7215
9595
11765
11895
15110
15270

UTC(GMT) 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

INDONESIA

- Voice of Indonesia
- P.O. Box 157, Jakarta.
- "This is the Voice of Indonesia, Broadcasting from Jakarta"

11790
15200
E

11790
15200
E

11790
15200
J

11790
15200
E

IRAN

- Voice of Islamic Republic of Iran
- P.O. Box 41—3456, Tehran.
- "This is Tehran, the Voice of the Islamic Republic of Iran"

9022
9770
11930
E

IRAQ

- Radio Baghdad
- Salihiya, Baghdad.
- "Idha'at Al-Jumhoriya Al Iraqla Fi Baghdad"

11935
E

7180
9585
A

9745
E

11935
A

11935
A

ISRAEL

- Israel Broadcasting Authority
- P.O. Box 1082, Jerusalem.
- "This is Kol Israel Broadcasting from Jerusalem"

E E E
7410 15585
9815 17630
11650

E
9815 12025
11655 15585

15585 E
17630
21495
21625

12025
E

E
9009 7412
9815 9815 E
11655 11655
12025 12025
15585 15585

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

ITALY

- Italian Radio
- Casella Postale 320, Rome. Viale Mazzina 1400195, Rome
- "This is the Italian Radio and Television Service, Broadcasting from Rome"



IVORY COAST

- Radiodiffusion Ivoirienne
- B.P. V191, Abidjan.
- "This is the International Service of Radio Ivory Coast Broadcasting from Abidjan"



JAPAN

- Radio Japan
- NHK Center, 2-2-1, Jinnan, Shibuya-ku, Tokyo 150.
- "This is Radio Japan, the Overseas Broadcasting Service of NHK in Tokyo"



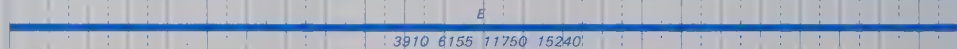
UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

- Radio Tampa/Nihon Short Wave Broadcasting Company Limited (NSB)
- 1-9-15, Akasaka, Minato-ku, Tokyo 107.
- "Kochirawa Radio Tampa desu"

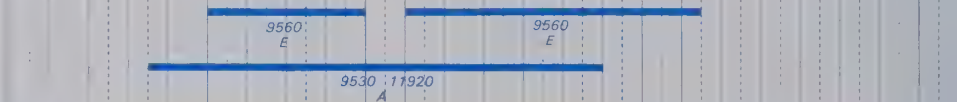


- Far East Network (FEN)
- Box 3381 APO San Francisco, CA 96328 U.S.A.
- "This is Far East Network, Tokyo"



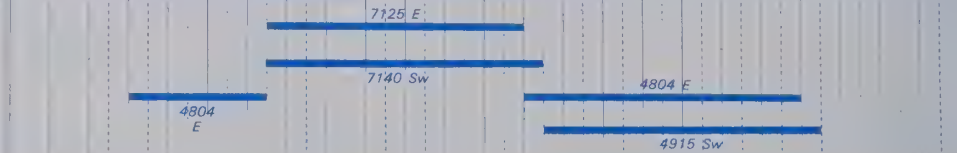
JORDAN

- Hashemite Kingdom Broadcasting Service
- P.O. Box 909, Amman.
- "This radio Jordan, Broadcasting from Amman"



KENYA

- Voice of Kenya
- Box 30456, Nairobi.
- "This is the General Service of the Voice of Kenya" "Hii ni Sauti Ya Kenya"



UTC(GMT)

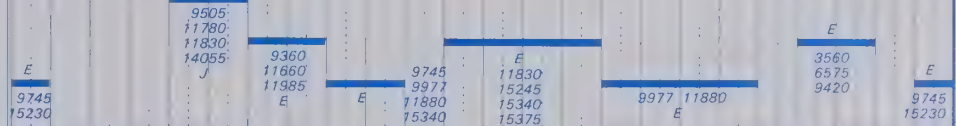
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

KIRIBATI

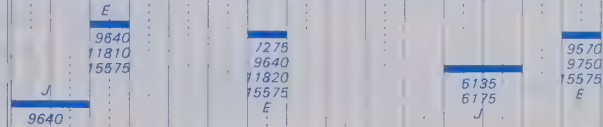
- Radio Kiribati
- P.O. Box 98 Bairiki, Tarawa Atoll

**PEOPLE'S DEMOCRATIC REPUBLIC OF KOREA**

- Radio Pyongyang
- Korean Central Broadcasting Committee, Pyongyang.
- "This is Radio Pyongyang"

**REPUBLIC OF KOREA**

- Radio Korea
- 1-55, Yeoido-dong, Youngdungpo-gu, Seoul.
- "This is Radio Korea"

**KUWAIT**

- Radio Kuwait
- P.O. Box 193, Kuwait
- "Huna al Kuwait"
- "This is Radio Kuwait"



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LIBERIA

- Radio ELWA
- Box 192, Monrovia.
- "This is ELWA, Broadcasting from Monrovia, Liberia"

4765
E11870
E4765
E6135
E11870
F4765
E15 11870
E 15**LAOS**

- National Radio of Laos
- B.P. 310 Vientiane.
- "This is the National Radio Broadcasting from Vientiane, Capital of the People's Democratic Republic of Laos"

7029
E7029
E7029
E7029
La7029
La7029
La**LEBANON**

- Radio Lebanon
- Beirut.
- "Radio Lebanon presents the English programmes" "Izaat Loubanan Min Beirut"

E A E
6215
(Voice of Hope)11780
F A E S11705
E**LESOTHO**

- Lesotho National Broadcasting Service
- P.O. Box 552, Maseru 100
- "This is Radio Lesotho"

E

9515

E

11830
(BBC Lesotho relay)

E

6190

4800
E S

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

LUXEMBOURG

- Radio Luxembourg
- Villa Louvigny, Luxembourg.
- "This Radio Luxembourg" "Ici Radio Luxembourg"
- "Hier ist Radio Luxembourg"

6090
E

15350 F week day

LIBYA

- Socialist People's Libyan Arab Jamahiriya Broadcasting Corporation
- P.O. Box 333, Tripoli.
- "Ithaa' Elthawrah Elshaabia men El Jamahiriya El Arabiyah Al Libiyah"

11815
15415
15450
17930
A5960
E

A

11815

E

6185
15415
15450
17930
A**MADAGASCAR**

- Radio Madagasikara
- B.P. 442, Tananarive.
- "Radio Madagasikaraty"

5010
6135
E Ma**MALAWI**

- Malawi Broadcasting Corporation
- P.O. Box 30133, Chichiri, Blantyre 3
- "This is the International Service of the MBC"

3380
5995
7130
E Ch

UTC(GMT)

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MALAYSIA

- Voice of Malaysia
- P.O. Box 1074, Kuala Lumpur.
- "This is the Voice of Malaysia"
- "Ini-lah Surara Malaysia"

E

6175

9780

15295

SABAH

- Radio Malaysia Kota Kinabalu
- P.O. Box 1016, Kota Kinabalu
- "Ini-Lah Radio Malaysia Kota Kinabalu"

M

4970

M

4970

5980

E

5980

E

SARAWAK

- Radio Malaysia Sarawak
- Jalan Satok, Kuching.
- "Inilah Radio Malaysia"

4950 7160 9605

E

4950

E

7160

9605

MALDIVES

- Voice of Maldives
- Dept. of Information & Broadcasting "Moonlight Hign", Male
- "This is the Overseas Service of Radio Maldives Broadcasting from Male in the Republic of the Maldives"

4754

Ma

4754

Ma

Ma

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4754

Ma

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

MALI

- Radiodiffusion Nationale Du Mali
- B.P. 171, Bamako.
- "Ici Bamako, Radiodiffusion Nationale de la République du Mali"

4838
5995
F

7110
7285
9635
111960
F

4783
4838
5995
E F A

MAURITANIA

- Radiodiffusion Nationale de la Republique Islamique de Mauritanie
- B.P. 200, Nouakchott
- "Ici Nouskchott, Radiodiffusion Nationale de la République Islamique de Mauritanie"

4845
6120
A F

4845
6120
A F

4845
A F

9610
A F

MAURITIUS

- Mauritius Broadcasting Corporation
- Broadcasting House, Louis Pasteur Str, Forest Side
- "This is Mauritius Broadcasting Corporation"

F E

F

C

I

F

E

4855
9710

MEXICO

- Radio Mexico
- Apt 20-620, Mexico 20, DF.
- "MERMx Radio Mexico"

S

6985
9705
11770
15430
17765

\$

5985
9705
11770
15430
17765

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

MONGOLIA

- Ulan Bator Radio
- C.P.O. Box 365, Ulan Bator.
- "This is Ulan Bator Calling"
- "Ankarari Ulanbatras Jarsj Baina"

6383

7235

11825

12070

E

7235

9570

12070

E

7290

9570

12070

E

MONACO

- Trans World Radio
- P.O. Box 141, Monte Carlo.
- "This is Monte Carlo, Trans World Radio"

11760

E

9610

E

MOROCCO

- Radiodiffusion Television Marocaine
- 1, Rue El Brihi, Rabat.
- "This is the Moroccan Broadcasting and Television System, Rabat"

15595

17595

F A S E

15335

F A S E

5950

7175

9520

11715

15250

17730

15595

17595

F A S E

15335

F A S E

MOZAMBIQUE

- Radio Mozambique
- C.P. 594, Maputo.
- "This is Radio Mozambique"

3265

4855

E

9525

11680

11820

E

3265

4855

11820

E

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

NEPAL

- Radio Nepal
- P.O. Box 634, Singha Durbar, Kathmandu.
- "This is Radio Nepal" "Yo Radio Nepal Ho"

3425
5005
9590
E

35 20
3425
5005
9590
E

NETHERLANDS ANTILLES

- Trans World Radio
- Trans World Radio, Bonaire, Netherlands Antilles
- "This is the international sound of the Caribbean, Trans World Radio, Bonaire"

9535
E

11815
E

- Radio Nederland Relay Station

6165
9590
E

6165
9715
E

9715
9770
E

15220
17605
E

NEW CALEDONIA

- Radio Noumea
- B.P. G3, Noumea.
- "Ici Noumea, Société France Regio 3"

3355
7170
11710
F

3355
7170
11710
E (Sat)

3355
7170
11710
F

UTC(GMT) 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

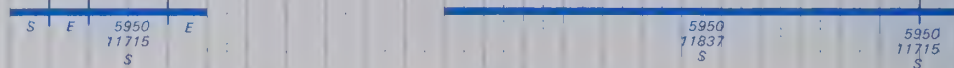
NEW ZEALAND

- Radio New Zealand
- P.O. Box 2092, Wellington.
- "This is Radio New Zealand"



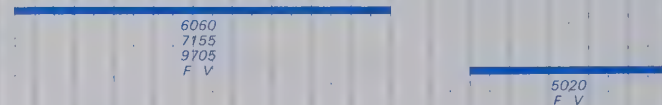
NICARAGUA

- Radiodifusora Nacional
- Villafontana, Managua.
- "Aquí Radiodifusora Nacional en Managua, Nicaragua"



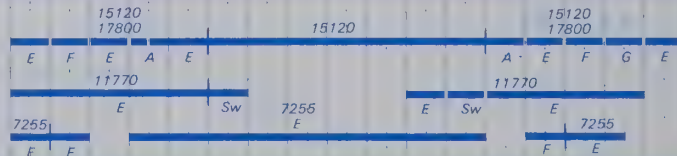
NIGER

- Office de Radiodiffusion-Télévision du Niger
- B.P. 361, Niamey
- "Ici la Voix de Sahel"



NIGERIA

- Voice of Nigeria
- Lagos
- "This is the International Service of the Voice of Nigeria"



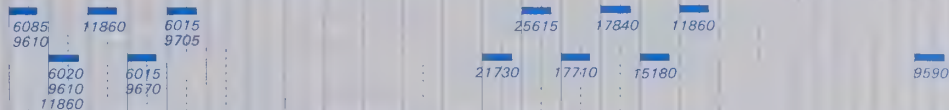
UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

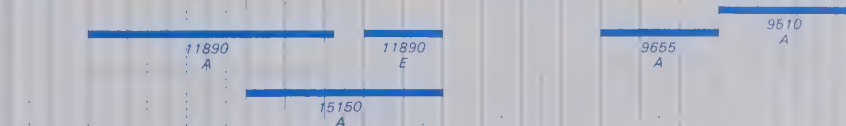
NORWAY

- Radio Norway
- Bj. Bjornson Plass 1, Oslo, 3.
- "This is the Overseas Service of Radio Norway" "Dette er Norsk Rikskringkasting"

E N S (ENGLISH-SUNDAYS MONDAYS UTC ONLY)

**OMAN**

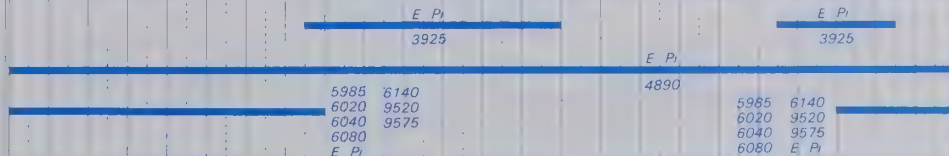
- Radio Oman
- P.O. Box 600, Oman.
- "This is the English Service of Radio Oman"

**PAKISTAN**

- Radio Pakistan
- P.O. Box 443, Karachi.
- "This is Radio Pakistan"

**PAPUA NEWGUINEA**

- National Broadcasting Commission (NBC)
- Box 1359, Boroko
- "This is National Radio"



UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

PARAGUAY

- Radio Nacional
- Olivia Esq. Alberdi, 6 to piso, Asuncion
- "Radio Nacional en Asuncion, Paraguay"

6025
11915
S

6025
11915
S

6025
11915
S

PERU

- Radio Nacional
- Av. Petit Thouars 441, Lima.
- "Radio Nacional del Peru, la primera emisora del Pais"

9560
9860
S

9560
9860
S

POLAND

- Radio Warsaw
- Al Niepodleglosci 75/77, Warsaw
- "This is Warsaw calling" "Tu Polskie Radio Warszawa"

E P E P
6095 7270 11815
6135 9525 15120
7145

E
6135 7270 9675

P E
6095
7285

9525
9675
11840
15120 E

E
6135
9540
E
7125
7145
9525
9675

E 7125
9525
9675
5995
6135
7125
7270
E
6095
7285
E

PORTUGAL

- Radio Portugal
- Rua do Quelhas 21, 1200 Lisbon.
- "This is Radio Portugal, speaking to you from Lisbon"
- "Aqui Lisboa, Servico Ultramarino de Emissora Nacional"

E
6090
11925

E
6075
9575

E E E
21645 17880 15250
17880

E
6025
9740
11775

UTC(GMT)

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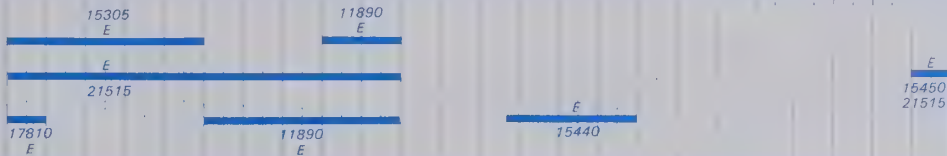
22

23

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PHILIPPINES

- Far East Broadcasting Company (FEBC)
- Box 1, Venezuela, Metro-Manila.
- "This is FEBC Radio International transmitting from the Philippines."

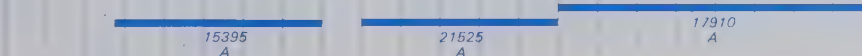


- Radio Veritas Asia
- P.O. Box 939, Manila.
- "This is Radio Veritas Asia"



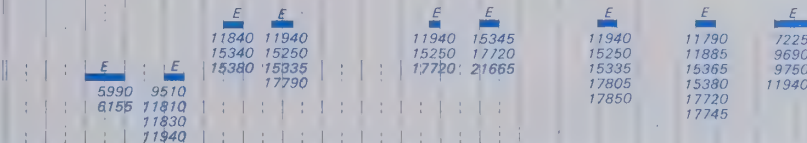
QATAR

- Qatar Broadcasting Service
- P.O. Box 1414, Doha
- "This is Qatar Broadcasting Station from Doha" "Idha'at at Qatar Min al Doha"



ROMANIA

- Radio Bucharest
- P.O. Box 111,, Bucharest
- "This is Bucharest calling" "You are turned to Radio Bucharest"



UTC(GMT)

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RWANDA

- Radiodiffusion de la Republique Rwandaise
- B.P. 83, Kigali.
- "Ici Kigali, Station de Radiodiffusion Nationale de la Republique Rwandaise"

3330
6050
Ky Sw E

3330
6050
Ky Sw E

SÃO TOME E PRINCIPE

- Radio Nacional de São Tome e Principe
- Caixa Postal 44, São Tome.
- "Aqui Sao Tome, transmite Radio Nacional da Republica Democratica de São Tome e Principe"

4807
P

SAUDI ARABIA

- Broadcasting Service of the Kingdom of Saudi Arabia
- Riyadh.
- "This is Radio Jeddah, the Broadcasting Service of the Kingdom of Saudi Arabia"

A

11730
15335
21455
21545

11855
15415
E

15245
E

11855
F

11855
F

A
7250
11685

SENEGAL

- Radiodiffusion du Senegal
- B.P. 1765, Dakar
- "Ici Radiodiffusion Senegal emettant de Dakar" "This is Radio Senegal Broadcasting from Dakar" "Al ithaa' t'ill Mamlakah t'ill Arabiyah al Saudiyah min arriyahd"

4890
7170
7210
F V Sat Sun

11895
F V
Mon-Fri

7210
11895
F

7170
F V Sat Sun

7170
7210

4890
7170

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

SEYCHELLES

- Far East Broadcasting Association (FEBA)
- Box 234 Mahé.
- "This is FEBA, Seychelles"


 11800
 15200
 E
 (Sat Sun)


 11865
 15325


 11895
 15325

SIERRA LEONE

- Sierra Leone Broadcasting Service
- New England, Freetown
- "This is the Sierra Leone Broadcasting Service"

E

5980

SINGAPORE

- Singapore Broadcasting Corporation
- P.O. Box 1902, Singapore
- "This is Radio Singapore" "Inilah Radio Singapura"

E

5010
5050
11940

E

5010
5050
11940

SOLOMON ISLANDS

- Solomon Islands Broadcasting Corporation
- P.O. Box 654, Honiara.
- "This is the National Service of Solomon Radio"

5020
9545
E P1

5020
9545
E P1

UTC(GMT)

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18

19

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SOMALIA

- Somali Broadcasting Service
- Ministry of Information and National Guidance, Private Postbag, Mogadishu.
- "This is Radio Mogadishu, the Voice of the Somali Democratic Republic"

8095
8790
11950
15215

Am Ga E

A F Af Am Ga

SOUTH AFRICA

- Voice of South Africa (Radio RSA)
- P.O. Box 4559, Johannesburg. P.O. Box 8606, Johannesburg 2000.
- "This is Radio RSA, the Voice of South Africa, calling from Johannesburg"

5980
9615
11730
E

E

3230 7270
4990 9585
5980

7270
11900
15220
17780
E

E

15220
21535
25790
E

E

9585
15220
25790
E

E

4835 11790

7270
9585
15155
17745
E

E

SPAIN

- Radio Exterior de España Radio Nacional de España
- Aptdo (P.O. Box) 150039, Madrid-24.
- "This is the Spanish Foreign Radio Broadcasting from Madrid"

9630
11880
E

9630
11880
E

9765 11760
11840 15375

9360 11775 15125
9530 11880
9630 11945

SRI LANKA

- Sri Lanka Broadcasting Corporation
- P.O. Box 574, Torrington Square, Colombo 7.
- "This is the Sri Lanka Broadcasting Corporation" "Me Sri Lanka Guwan Vidulil"

6005
9720
15425
E

9720
15425
E

11835
15120
17850

E

6075
9720
15425
E

E

	UTC(GMT)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
SUDAN • Radio Omdurman • P.O. Box 572, Omdurman. • "This is Radio Omdurman, the Voice of the Democratic Republic of the Sudan" "Huna Omdurman, Ithaa til jumhuriyah el Sudan el Demokrautiyah"																										
SURINAM • Sros • P.O. Box 271 Paramaribo																										
• Radio Apintie • P.O. Box 595 Paramaribo.																										
SWAZILAND • Trans World Radio • P.O. Box 64, Manlani • "From the beautiful Kingdom of Swaziland, This is Trans World Radio"																										

UTC(GMT)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
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SWEDEN

- Radio Sweden.
- S-10510, Stockholm.
- "This is Radio Sweden"
"Utlandsprogrammet, Sveriges Radio"

E		E		E		E		E
11905		11765		6065		11845		
	E	15190	E	15240		11955		E
9695		21690						9695
11705		9630		17845				11705
15290		17820		21615				15380
		21610		21635				
		21690		21700				

SWITZERLAND

- Swiss Radio International
- Giacomettistrasse 1, CH-3000, Bern 15.
- "This is Swiss Radio International"

£	£	£	£	£	£
6135	3985	9560	3985	3985	3985
9725	6165	15305	9535	6165	6165
11715	9535	21520	15305	9535	9535
15305	9560	21695	17785	15125	11910
	15305		17830	17830	15305
	21520		21520	21520	17830
	21695		21570	21570	17850
					21520

TAIWAN

- Voice of Free China
- 53 Jen Ai Road, Section 3, Taipei City 106.
- "This is the Voice of free China"

E	E	E	J	E	E
5985 +	11745		5980	7130	9610 11825
	11825			11745	9765 15270
	15345				11725 15345
E	17890	E	J		11860 17890
	11825				15225
	15345	5985 +			
	17890		7130		
			9765		
			11745		
	11740 + E			5980 + Flokda relay	

TANZANIA

- Radio Tanzania
- P.O. Box 9191, Dar es Salaam.
- "This is the External Service of Radio Tanzania Dar es Salaam" "Hii ni idhaa ya Taifa ya Radio Tanzania Dar es Salaam"

Figure 1 consists of two diagrams, (a) and (b), illustrating the effect of the number of trials on the probability of a false alarm. Both diagrams show a horizontal axis representing a signal value, with a vertical line indicating a threshold at 7165. In diagram (a), a single trial is shown with a signal value of 9685, which is above the threshold, resulting in a false alarm. In diagram (b), multiple trials are shown, and the signal value of 9685 is again above the threshold, resulting in a false alarm.

	UTC(GMT)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
THAILAND • Radio Thailand • Rajdamnern Ave. Bangkok-2 • "This is Radio Thailand"																										
TAHITI • France Regions 3 • B.P. 125, Papeete. • "Ici Tahiti France Regions 3" "O Tahiti teie te tuhaa toru"																										
TOGO • Radiodiffusion-Télévision Togolaise • B.P. 434, Lomé. • "Ici Lomé, Radiodiffusion Télévision Togolaise, la Voix de la Nouvelle Marche, chaîne internationale"																										
TRISTAN DA CUNHA • Zoe Tristan Radio • The Administrator, Tristan da Cunha, South Atlantic Ocean, via Cape Town, South Africa. • "This is Tristan Radio, the Broadcasting Service of Tristan da Cunha"																										

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

TUNISIA

- Radiodiffusion Television Tunisienne
- 71, Avenue de la Liberte, Tunis.
- "Ici Tunis, Radiodiffusion Television Tunisienne" "Ici Raido Tunis" "Itha at il Lumhuriya at Tunisiya"

7225
11745
11970
15225
A

TURKEY

- Voice of Turkey
- Nevzat Tandogan Caddesi 2, Kavaklidere, Ankara.
- "This is the Voice of Turkey" "Burasi Türkiyenin Sesi Radyosu"

11755
E

9515
9610
9735
9755
11755
11765
E

UGANDA

- Radio Uganda
- P.O. Box 2038, Kampala
- "This is Uganda, Kampara"

9515
9730
15325
E

E F Sw

5027
6030
9515
9730

6030
9515
9730
E

E F Sw

5027
6030
9515
9730

6030
9515
9730
E

UNITED ARAB EMIRATES

- Voice of the United Arab Emirates
- P.O. Box 637, Abu Dhabi.
- "Sout al Emirat al-Arabiyah al-Mutahidad min abu Dhabi"

11730 17775
15435 17830
17715 21700

A E

A E

17775
21655
21695

A E

15300
15320
21655

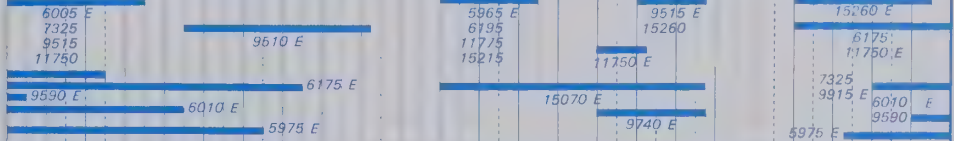
A E

UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

UNITED KINGDOM

- British Broadcasting Corporation (BBC)
- Bush House, Strand, London WC2B 4PH.
- "This is London Calling"

**UNITED STATES OF AMERICA (USA)**

- Voice of America (VOA)
- Washington, DC 20547, USA
- "This is the Voice of America"

• Programs in English

To Europe

3980 6040 9770

5955

9760 11760 15205 6040

7115
7200
7205
9700
11710
11925
15180
15250
17740
21540

7125 15395

15260

6110 9760
9646 15205

7105

26000

9770
11760
15185
15290
17820
21460

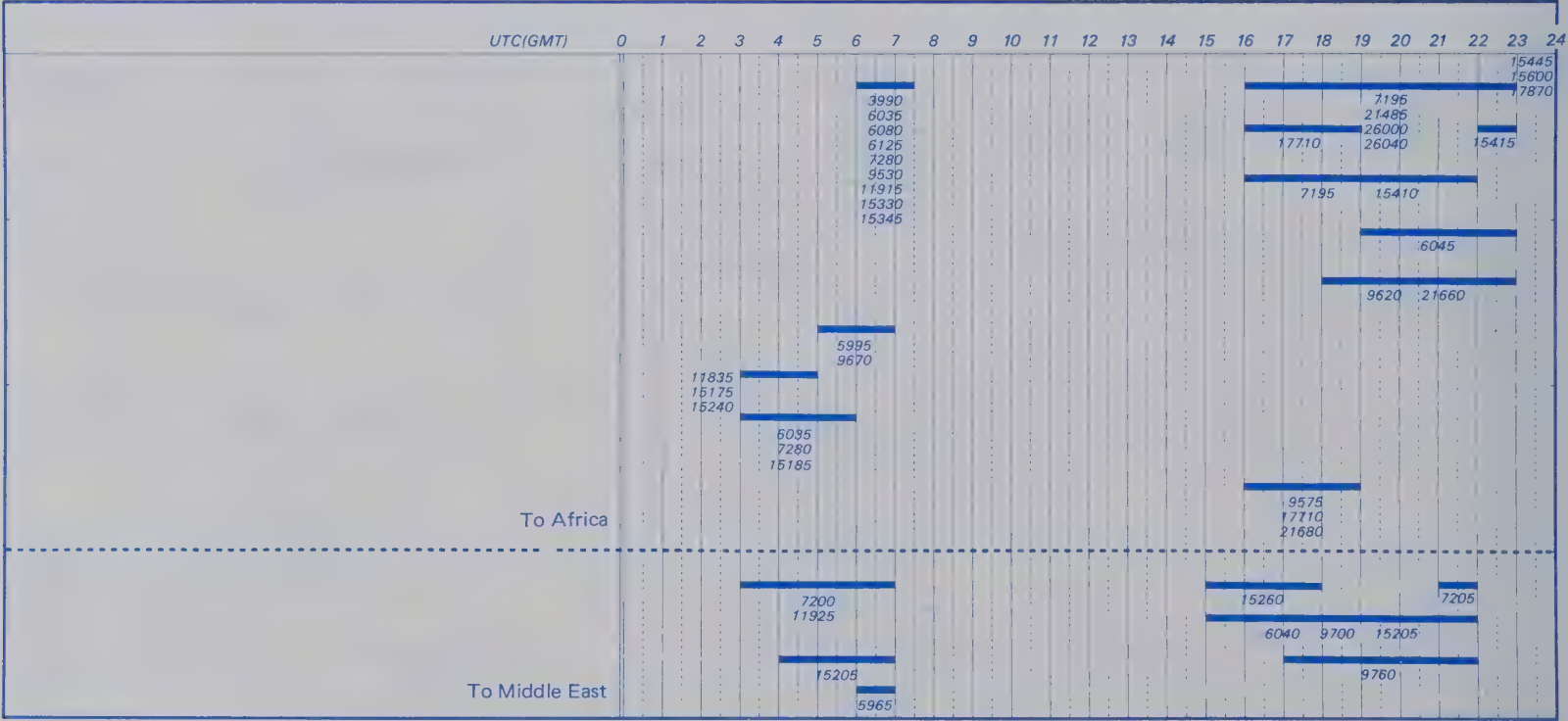
To Asia

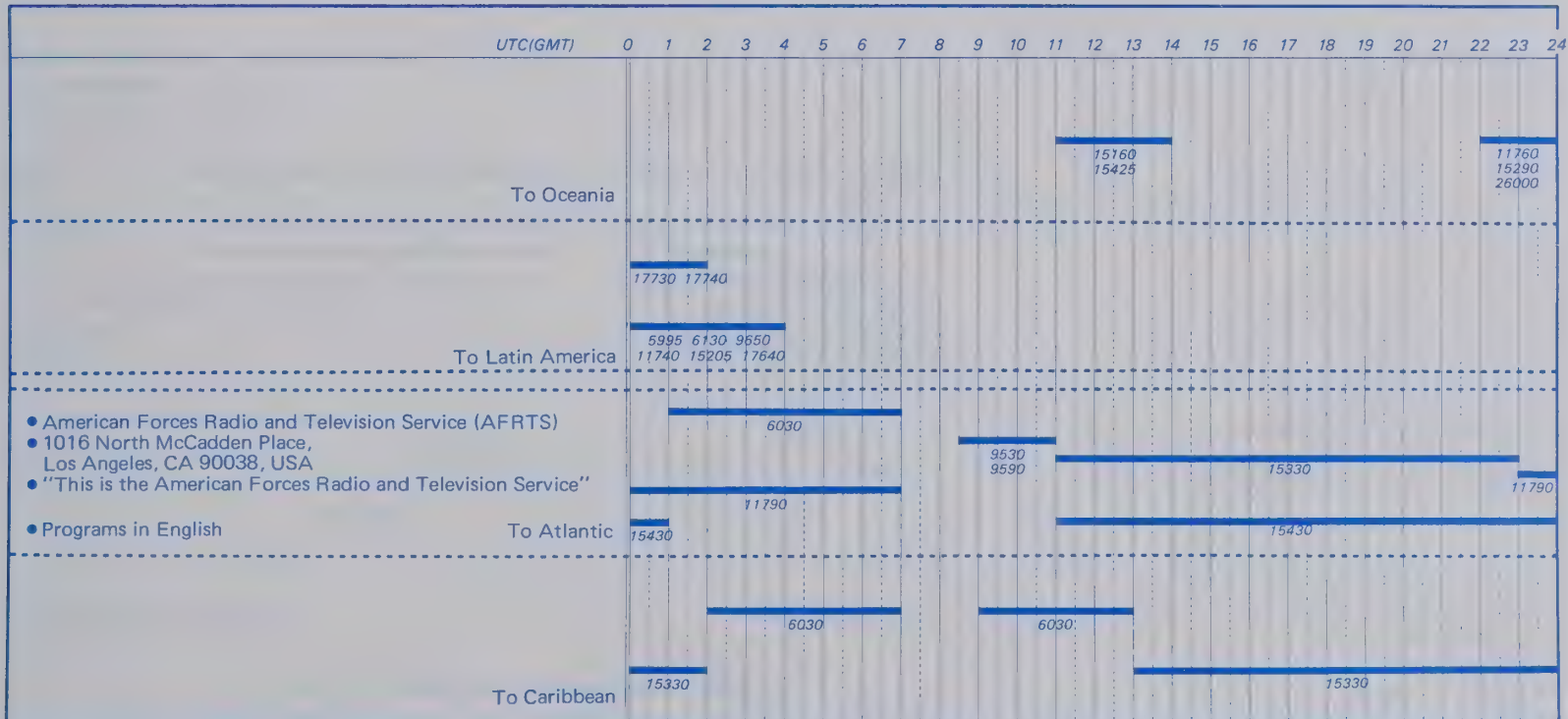
15425

9700

6110 11715
9646 15160
9760 21615

9770
11760
15185
15290
17820
21460





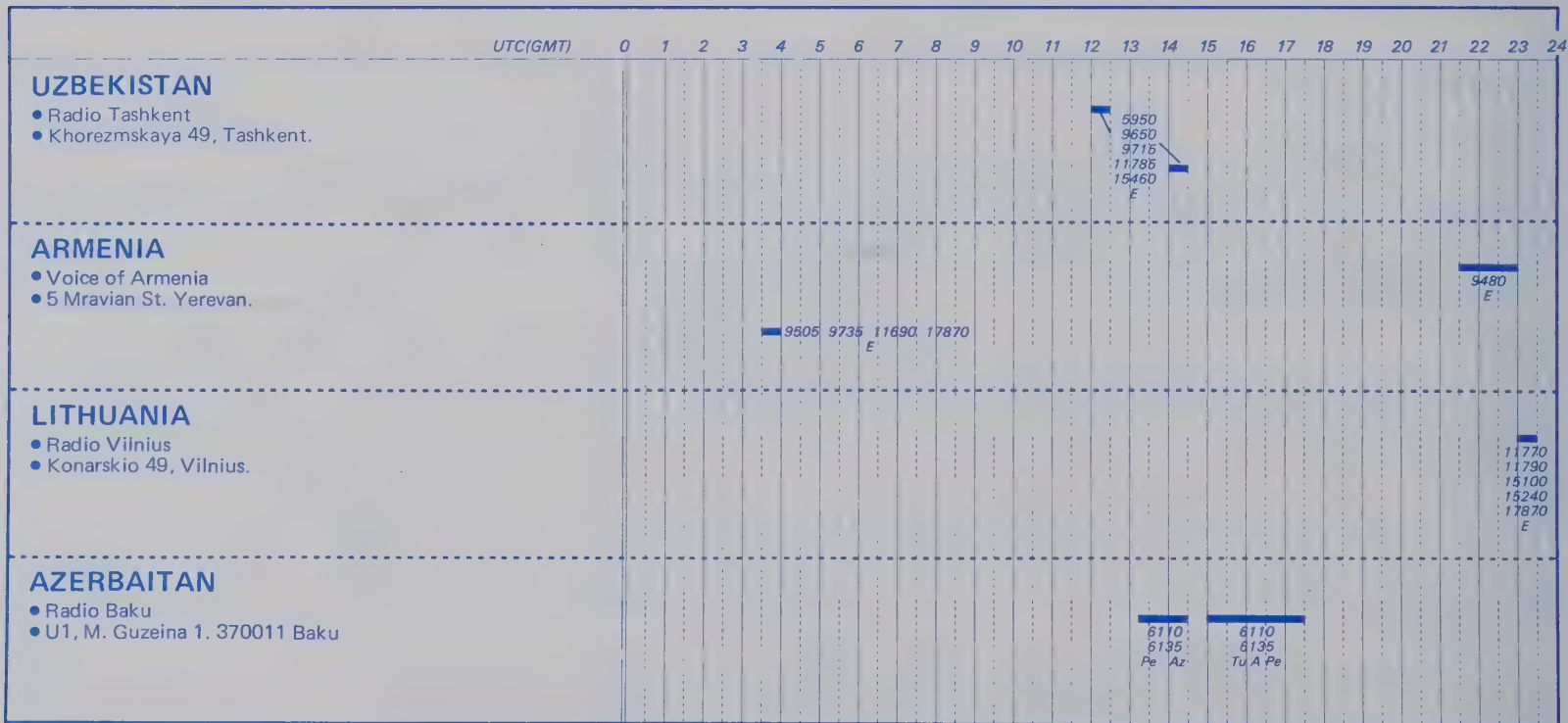
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

- United Nations Radio
- New York, NY 10017, USA
- "This is the United Nations"

- Radio Moscow
- Piatnitskaja ulitza 25, Moscow.
- "This is Radio Moscow" "Govorit Moskva"

- Radio Station Peace & Progress,
- Moscow
- "This is Radio Station Peace and Progress the Voice of Soviet Public Opinion"

- Radio Kiev
- 26 Kreshchatik Ave. Kiev

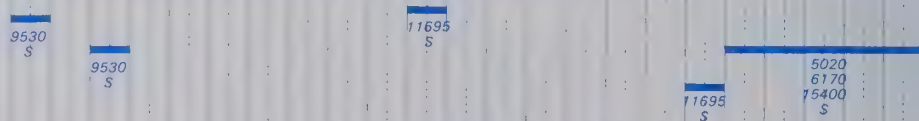


	UTC(GMT)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
TADZHIKISTAN ● Radio Dushanbe. ● U1 Chapaeva 25, 734025, Dushanbe.																										
BYELORUSSIA ● Radio Minsk ● U1, Krasnaya 4, Minsk.																										
UPPER VOLTA ● Radiodiffusion Television Voltaïque ● B.P. 7029, Ouagadougou ● "Ici Ouagadougou, La Voix de la Renouveau"																										
URUGUAY ● Radio El Espectador ● Soriano 1278, Montevideo.																										

UTC(GMT) 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

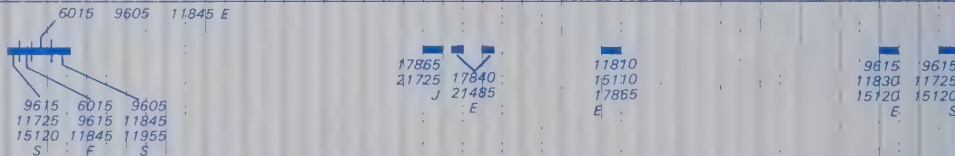
VENEZUELA

- Radio Nacional
- AP 3955, Caracas



VATICAN

- Vatican Radio
- Vatican City
- "This is Vatican Radio"



VANUTU

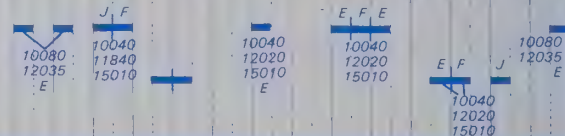
- Radio Vanutu
- P.O. Box 49, Port Vila.
- "This is Radio Vanutu"



Mix

VIETNAM

- Voice of Vietnam
- 58, Quang Su Street, Hanoi.
- "This is the Voice of Vietnam, broadcasting from Hanoi"



UTC(GMT)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

ZAMBIA

- Zambia Broadcasting Services.
- P.O. Box 50015, Lusaka.
- "This is the General Service of Radio Zambia broadcasting from Lusaka"

E

9580

11880

E V(Sunday)

E

17895

7250

9580

E V

ZIMBABWE

- Zimbabwe Broadcasting Corporation
- P.O. Box HG 444, Highlands, Salisburg.
- "This is Radio Zimbabwe"

E

3396

E

7285

V

E

3396

FM STATIONS (UNITED STATES) Station names and frequencies may change without notice.

Frequency is in MHz.

ALABAMA	WQGL	93.5	Guntersville	95.5	Ozark	WSCA	100.9	KUAC	101.7	Soldotna		KCRJ	95.9			
Abbeville	Carrollton		Haleyville		WORJ	York		Homer		KSKA	101.7	Douglas				
94.3	WXLE	94.1	WJBB-FM	92.7	WVOT	103.9	WOAB	100.9	KQOK	100.9	Stariski Creek	KKRK	95.3			
Albertville	WMBW	103.1	Hamilton		Phenix City		WLSY	99.3	KGTL	102.3	KBCN	100.9	Flagstaff			
WQSB	Chickasaw		WERH-FM	92.1	WEIZ	100.1	ALASKA		KGTL	103.5	Tok	KNAU	88.7			
Alexander City	WJQY	98.3	Homewood		Pratville		Adak		KBCN	104.9	KJNP-FM	100.1	KMCR	89.5		
WRFS-FM	Clanton	106.1	WMBW	95.3	WQIM	95.3	AFR-FM	101.1	Juneau		KDKB	92.1	KDKB	92.1		
Andalusia	WEZZ	97.7	Huntsville		Reform		Akhiook		KTOO	104.3	Wrangell	KSTK	101.7	KAFF	92.9	
WKYD-FM	Cullman	98.1	WLRH	89.3	WVRT	101.7	KMXT	101.7	Karluk		Yakutat	KSOJ	93.9	KSOJ	93.9	
Anniston	WKLN	92.1	WOCG	90.1	Roanoke		Anchorage		KMXT	101.7	KJFP	103.9	KCRJ	101.7	KCRJ	101.7
WHMA-FM	WFMH-FM	101.1	WAED	90.9	WELR-FM	95.3	KSKA	91.1	Kenai				Glendale		Glendale	
Arab	Decatur		WNDA	95.1	Scottsboro		KBCN	100.5	KQOK	100.1	ARIZONA		KEZZ	92.3	KEZZ	92.3
WCRO	WBQM	91.7	WAHR	99.1	WKEA-FM	98.3	KGOT	101.3	KBCN	107.1	Apache Junction rp		Globe		Globe	
Ashland	WRSR	96.9	Jackson		Selma		KRKN	102.1	Ketchikan		KSTM	107.1	KIKO-FM	100.3	KIKO-FM	100.3
WASZ	WDRM	102.1	WHOD-FM	104.9	WTUN	100.1	KKLV	103.9	KRBD	105.9	Arizona City		Green Valley		Green Valley	
Athens	Demopolis		Jacksonville		WALX	100.9	KNIK	105.5	Kodiak		KKAF	106.3	KEZG	92.1	KEZG	92.1
WZYP	WNAN	106.3	WLJS	91.9	WPCS	105.5	KWHL	106.5	KMXT	100.1	Benson		Kayenta		Kayenta	
Atmore	Dothan		Jasper		Sheffield		Anchor Point		KBCN	106.3	KAVV	97.7	KOB-FM	106.3	KOB-FM	106.3
WSKR	WPCS	88.7	WWWB-FM	102.5	WBTG	106.3	KBCN	107.1	Larsen Bay		Bisbee		KRSJ	95.9	KRSJ	95.9
Auburn	WTVY-FM	95.5	Marion	103.9	Stevenson		Clam Gulch		KMXT	101.7	KZMK	92.1	Kingman		Kingman	
WEGL	WOOF-FM	99.7	Mobile		WVSV	101.7	KBCN	104.9	Lemon		Bullhead City		KZZZ	92.7	KZZZ	92.7
WFRI	Enterprise		WHIL	91.3	Sylacauga		Clover Pass		KTOO	101.7	KRHS-FM	102.7	KILA	103.1	KILA	103.1
Bay Minette	WLHQ	96.9	WBLX	92.9	WMLS	98.3	KRBD	107.1	Mendenhall Valley		KILA	95.5	Lake Havasu City	91.1	Lake Havasu City	91.1
WWSM	WKMX	106.7	WKSJ	94.9	Talladega		Craig		KTOO	103.1	Bumble Bee		KBBC	95.9	KBBC	95.9
Birmingham	Eufaula		WLPR	96.1	WHTB	92.7	KRBD	100.1	Nome		KCRJ	99.3	Marana		Marana	
WBHM	WKQK	92.7	WABB-FM	97.5	Thomasville		KRBD	101.7	KICY-FM	100.3	Carrizo		KOPO	98.3	KOPO	98.3
WJSR	Evergreen		WKRQ-FM	99.9	WJDB-FM	95.3	Dot Lake Village		North Pole		KNNB	88.1	McNary		McNary	
WYSU	WEGN	93.5	WTOH	105.9	Troy		KJNP-FM	107.1	KJNP-FM	100.3	Casa Grande		KNNB	90.9	KNNB	90.9
WGIB	Fairhope		Monroeville		WTSU	89.9	Fairbanks		Old Harbor		KSA	105.5	Mesa		Mesa	
WDJC	WHSP	92.1	WMFC-FM	99.3	WIGC	105.7	KAYY	101.1	KMXT	101.7	Cedar Creek		KDKB	93.3	KDKB	93.3
WAPI-FM	Fayette		Montgomery		Tuscaloosa		KQRZ	102.5	Petersburg		KNNB	91.9	KZZP-FM	104.7	KZZP-FM	104.7
WMBW	WHKW	98.1	WLWI	92.3	WVUA	90.7	KUAC	104.7	KFSK	100.9	Chandler		Mingus Creek		Mingus Creek	
WMJJ	Florence		WBAM-FM	98.9	WUAL	91.5	Fort Greely		KFSK	103.1	KMLE	107.9	KCRJ	92.1	KCRJ	92.1
WBQM	WQLT	107.3	WHY-FM	101.9	WTUG	92.7	AFR-FM	90.5	KFSK	103.9	Cibecue		Mud Cat Tank		Mud Cat Tank	
WRKK	Gadsden		WREZ	103.3	WUOA	95.7	Fort Yukon		KNNB		KNNB	89.9	KNNB	88.9	KNNB	88.9
WZZK	WEXP	91.5	Muscle Shoals		WACT-FM	105.5	KJNP-FM	104.9	KBYR-AM	100.1	Clifton		Nogales		Nogales	
WKXX	WOEN	103.7	WLAY-FM	105.5	Tuscumbia		Galena		Shemya		KQYT	104.9	KAYN	98.3	KAYN	98.3
WENN	Geneva		Oneonta		WVNA-FM	100.3	KSKA	100.1	AFSN	90.5	Coolidge		Page		Page	
Brewton	WGEA-FM	93.5	WKL D	97.7	Tuskegee		Haines		AFFMR	101.1	KGEZ	103.9	KXAZ	93.5	KXAZ	93.5
WKNU	Greenville		Opp		WBIL-FM	95.9	KHNS	102.3	Sitka		Cottonwood		Parker		Parker	
Butler	WKXN	95.9	WAMI-FM	102.3	Union Springs		Healy		KCAW	104.7	KMCR	89.5	KMDX	99.3	KMDX	99.3

Payson	103.9	KXCI	91.7	KEEO	95.3	KISR	93.7	Mammoth Spring		KLRC	90.3	KEAR	107.1	Burney	
Phoenix		KWFM	92.9	Cave City		KMAG	99.1	KAMS	95.1	KMCK	105.7	Atascadero			106.1
KIAI	89.5	KRQQ	93.7	KZIG	89.9	KTCS-FM	99.9	Marshall		Springdale		KIQO	104.5	Calexico	
KMCR	91.5	KJYK	94.9	Cherokee Village		KXX	100.9		104.3	KCIZ	104.9	Atherton		KQVO	97.7
KOOL	94.5	KLPX	96.1	KWFC	99.3	KCFO	103.1	Mena		Stamps		KMAH	89.1	Camarillo	
KQYT	95.5	KNDE	99.5	KFCM	100.9	Greenwood		KUOL	101.7	KMSL	100.1	Auburn		KZTR	95.5
KMEO-FM	96.9	KUAT-FM	103.1	Clarksville		KLAZ	101.7	Monticello		Texarkana		KHYL	101.1	Cambria	
KKLT	98.7		107.5	KLYR-FM	92.7	KAJJ	106.3	KHBM-FM	93.5	KOSY-FM	102.5	Avila Beach		KCBX	90.9
KNNN	99.9	Whiteriver		Clinton		Harrison		Morrilton		KADO-FM	107.1	KCBX	90.9	Carlsbad	
KHEP-FM	101.5	KNNB	88.1	KHPQ	92.1	KCWD	96.7	KVOM-FM	101.7	Van Buren		Bakersfield		KKOS	95.9
KNIX-FM	102.5	Wickenburg	105.5	Conway		KHOZ-FM	102.9	Mountain House				KQXR	94.1	Carmel	
Prescott		Wilcox		KUCA	91.3	Havana		KTLO-FM	98.3	Waldron		KHIS-FM	96.5	KLRB	101.7
KMCR	90.1	KWCX	98.3	KHDX	93.1	KAJJ	104.9	Mountain View		KAJJ	94.3	KGFM	101.5	Carnelian Bay	
KCRJ	95.3	Silliams		KISR	99.3	Heber Springs		KWOZ	103.3	KRWA	103.1	KKXX	107.9	KHTX	103.7
KNOT-FM	98.3	KAFF	193.1	KMJX	105.1	KAWW-FM	96.7	Murfreesboro		Walnut Ridge		Barstow		Carpinteria	
KOOL	100.1	Winslow		Corning		Helena		KJKK	95.3	KCAZ	106.3	KZNS	94.3	KGFT	101.7
KBBC	103.1	KRIM	95.1		93.5	KCRI-FM	103.1	Nashville		Warren		KVVQ	103.7	Cathedral City	
KXKQ	103.9	Yuma		Crossett		Hope		KNAS	105.5	KWRF-FM	105.5	Berkeley		KWXY-FM	98.5
KHEP-FM	105.5	KJOK	93.1	KAGH-FM	104.9	KHFA	104.9	Newport		West Helena		KPFB	89.3	Cayucos	
KNIX-FM	107.1	KTTI	95.1	Dardanelle		Hort Springs		KOKR	105.5	KQEE	104.9	KALX	90.7	KCBX	91.1
Safford	94.1			KWKK	102.3	KSPA	96.7	Osceola		Wynne		KPFA	94.1	Ceres	
Scottsdale		ARKANSAS		De Queen		KWBO	97.5	KHFO	98.1	KWYN-FM	92.7	KBLX	102.9	KBES	89.5
KOPA	100.7	Arkadelphia		KDON-FM	92.7	KACQ	106.3	Ozark				Big Bear Lake		Chester	
Sedona		KSWH	91.1	De Witt		Jacksonville		KZRK-FM	96.7	CALIFORNIA		KTOT	101.7	KSUE-FM	94.3
KOOL	99.3	KDEL	100.9	KDEW-FM	96.7	KEZQ	100.3	Paragould		Alameda		Big Bend		KSRN	98.3
KOST	100.1	Ashdown		Dumas		Jonesboro		KHIG	104.9	KJAZ	92.7	KOIT	105.5	KALF	99.3
KQYT	103.1	KMLA	103.9	KDDA-FM	107.1	KASU	91.9	KLQZ	107.1	Alturas		KALF	107.1	Chico	
KMEO-FM	105.5	Augusta		El Dorado		KJBR	101.9	Piggott		KBGX	94.5	Bishop		KCHO	91.1
Show Low		KABK	97.7	KLBQ	99.3	KFIN	107.9	KTEI	105.5	KTMT	100.9	KSRN	92.1	KFMF	93.7
KVWM-FM	93.5	Batesville		KAYZ	103.1	Lake Hamilton		Pine Bluff		KVIP-FM	101.7	KIOQ	100.7	KPAY-FM	95.1
KRFM	96.5	KGED	88.1	Fairfield Bay		KISR	93.5	KFXE	92.3	Anaheim		Blythe		China Lake	
Sierra Vista		KZLE	93.1	KFFB	106.3	Lake Village		KADL-FM	94.9	KEZY-FM	95.9	KERU	88.5	KUSC	88.1
KTAZ	100.9	Benton		Fayetteville		KUUZ	95.9	Pocahontas		Anderson		KJMB	100.3	KVCR	88.7
Snowflake		KAKI	107.1	Little Rock		KUAF		KCYN	103.9	KEWB	94.3	KTOT	105.5	KTOT	92.1
KMCR	90.1	Berryville		KABF	88.3	KKEG	92.1	Rogers		Angwin		KNIX-FM	106.3	KNX-FM	94.3
Sun City		KSCC	107.1	KUAR	89.1	KISR	95.5	KAMO-FM	100.9	KPRN	89.9	Borrego Springs		KKGO	96.7
KWAO	106.3	Blytheville		KLRE	90.5	KCFO	100.1	Russelville		Apple Valley		KBSH	88.9	KLOS	99.3
Tempe		KHLS	96.3	KLPO	103.9	KNWA	103.9		100.9	KAPV	102.3	Brawley		KOTE	100.1
KUPD	97.9	Booneville		KEZA	107.9	KSSN	95.7	Salem		Arcadia		KSIQ	96.1	KQLH	103.1
Thatcher		KJON	92.7	KLAZ		KLAZ	98.5	KSAR	95.9	KMAX	107.1	Bridgeport		KOST	105.5
KFMM	99.1	Brinkley		KKYK	103.7	KOEK	103.7	Searcy		Arcata		KIOQ	100.1	KFAC-FM	107.1
Tsaile		KBRI-FM	102.3	Lonoke		Forrest City		KSER	99.3	KHSU	91.5	Buena Park		Chualar	
KNCC	91.9	Camden		KWTD	93.5	KBFC		Sheridan		KXGO	93.5	KBPB	90.1	KUBO	90.9
Tucson		KWEH	97.1	Magnolia		Fort Smith		KKDI-FM	102.3	KAHS	95.1	Burbank		Claremont	
KUAT-FM	90.5	Caulksville		KFMV	107.9	KSSN		Siloam Springs		Arroyo Grande		KMAX-1	107.1	KSPC	88.7

Clovis		Fallbrook		KCRH	89.9	KNTD	95.5	KRVE	95.3	KSFH	90.5	KROQ-FM	106.7	KRVH	101.5
KEAR	96.7	KEAR	107.1	Healdsburg		KAVO		KAMB	99.3	Mount Shasta		Paso Robles		Riverside	
Coachella		Fort Bragg		KREO	92.9	KWIN	97.7	Madera		KEDY	95.3	KDDB	92.5	KUCR	88.1
KVM	93.7	KOZT	95.3	Hemet		KUUL		KUUL	92.1	Nevada City		KEAR	105.5	KSGN	89.7
Compton		Fowler		KHYE	105.5	KEMR	88.3	Mammoth Lakes		KVMR	89.5	Patterson		KHNY	92.7
KJLH	102.3	KTED	96.7	Hollister		Lompoc		KMMT	106.3	Newport Beach		KOSO	93.1	KDUO	97.5
Concord		Fremont		KHIP	93.5	KEAR	95.9	Manteca		KOCM	103.1	Pebble Beach		KGGI	99.1
KVHS	90.5	KOHL	89.3	Holtville		KLPC	92.7	KQKK	96.7	Northridge		KSPB	91.9	Rosamond	
KGO-FM	103.7	KDOS	104.9	KGBA	100.1	KROK	100.9	Marina		KCSN	88.5	Petaluma			105.5
Covelo		Fresno		Hoopa		Lone Pine		KBOQ	92.7	Nubieber		KZST	100.1	Roseville	
KPAU	90.7	KFCF	88.1	KIDE	91.3	KIOQ	95.9	Mariposa		KVIP-FM	95.9	Pioneer		KPOP	93.5
Crescent City		KVPR	89.3	Imperial		KHOP	106.3	KUBB	96.3	Oakdale		KNGT	103.1	Sacramento	
KSOR	91.7	KFSR	90.7	KOZN	99.3	Long Beach		KEBR	105.5	KOKQ	95.1	Pismo Beach		KXPR	90.9
KCRE-FM	94.3	KSJV	91.5	Inglewood		KLON	88.1	Marysville		KPGA	95.3	KPGA	95.3	KYDS	91.5
KEAR	102.3	KFYE	93.7	KACE	103.9	KNOB	97.9	KCHO	91.9	KAAT	107.1	Placerville		KAER	92.5
Cupertino		KYNO-FM	95.7	Inyokern		KNAC	105.5	KRFD	99.9	Oak View		KHTN	92.1	KCTC	96.1
KKUP	91.5	KNAX	97.9	KIOQ	100.9	Lot Altos		Mendocino		KOVA	105.5	Pleasanton		KROY	96.9
KEAR	107.1	KFIG	101.1	Irvine		KFJC	89.7	KMFB-FM	92.7	Oceanside		KLHT	93.5	KZAP	98.5
Davis		KFRY	101.9	KUCI	88.9	KPEN	97.7	KOZT	95.9	KEZL	102.1	KSAN	94.9	KEBR	100.5
KDVS	90.3	KKNU	102.7	Jackson		Los Angeles		Merced		Ojai		KKHI	95.7	KEWT	105.1
KYLO	105.5	KKDJ	105.9	KNGT	94.3	KXLU	88.9	KBDR	89.1	KOVA	105.5	KGO-FM	103.7	KWOD	106.5
Delano		Garberville		Johnstonville		KPFK	90.7	KMYT	97.5	Ontario		Porterville		KXOA-FM	107.9
KDNO	98.5	KERG	100.1	KNIS	97.7	KUSC	91.5	KAMB	101.5	KNTF	93.5	KIOO	99.7	St. Helena	
KZAY	105.3	KEAR	105.5	KSUE-FM	102.3	KFAC-FM	92.3	Mill Valley		KEWE	97.7	Project City		KVYN	99.3
Desert Hot Springs		Garden Grove		King City		KNX-FM	93.1	KIOI	101.3	Oroville		KEBR	96.7	Salinas	
KECR	102.3	KIKF	94.3	KLFA	92.1	KZLA-FM	93.9	Mission Viejo		Oxnard		KCHO	91.5	KAMB	95.9
Druba		KWSS	94.5	Laguna Beach		KMET	94.7	KSBR	88.5	KDAR	98.3	KCHO	91.5	KEAR	97.7
KLTA	98.9	KSBK		KLOS	89.1	KLOS	95.5	Modesto		KCAQ	104.7	KALF	95.5	KWYT	100.7
Dublin		KUTE	101.9	KKGO	92.7	KFSG	96.3	KBHI	89.9	Pacific Grove		KRBQ	102.3	KDON-FM	102.5
KABL	98.1	Goleta		KOCM	103.1	KHTZ	97.1	KDHS	90.5	KAZU	90.3	Redding		KRAY	103.9
Dunsmuir		KMGQ	106.3	La Jolla		KJOI	98.7	KFIV-FM	102.3	KOCN	104.9	KCHO	90.7	San Ardo	
KVIP-FM	105.5	Grass Valley		KGB	101.5	KHOF	99.5	KBEE-FM	103.3	Palm Desert		KFMF	92.7	KEAR	97.7
El Cajon		KNCO-FM	94.3	KSDO-FM	102.9	KIQQ	100.3	KHOP	104.1	KCMS	103.1	KVIP-FM	98.1	San Bernardino	
KECR	93.3	Greenfield		Lake Arrowhead		KRTH	101.1	KEBR	106.3	Palm Springs		KALF	100.1	KVCR	91.9
El Centro		KEAR	95.9	KBON	103.9	KJLH	102.3	Mojave		KPSH	88.5	KSHA	104.3	KQLH	95.1
KXO-FM	107.5	Granada		Lancaster		KIIS	102.7	KDOL-FM	97.7	KCMS	97.7	Redlands		KOLA	99.9
El Cerrito		KSQU	101.7	KOTE	106.3	KOST	103.5	Monterey		KPSI-FM	100.9	KUOR	89.1	KVAC-FM	102.3
KECG	88.1	Hanford		KBIG	104.3	KWAV	96.9	KWAV	96.9	KDES-FM	104.7	KCAL-FM	96.7	San Clemente	
Escondido		KMGX	103.7	KEAR	107.1	KKGO	105.1	Monte Rio		KPLM	106.1	KGGI	98.9	KWVE	107.9
KOWN-FM	92.1	KKYS	107.5	Lemoore		KMGG	105.9	KRJB	97.7	Palos Verdes Estates		Redondo Beach		San Diego	
Eureka		Happy Camp		KQYZ	104.9	KLVE	107.5	Moraga		KNAC	105.5	KFOX	93.5	KSDS	88.3
KOWN-FM	92.1	KTMT	100.9	Livermore		Los Banos		KSMC	89.5	Paradise		Ridgcrest		KPBS	89.1
KPDJ	92.3	KBOY-FM	103.1	KEAR	93.5	KSNM	104.7	Mountain Pass		KNVR	96.7	KZIQ-FM	92.7	KPBS	89.5
KFMI	96.3	KEAR	103.9	KKIQ	101.7	Los Gatos		KXVR	99.5	Pasadena		KFIO	104.9	KFSD	94.1
KEAR	106.3	Hayward		Livingston		KUSP	90.3	Mountain View		KPCC	89.3	Rio Vista		KBZT	94.9

KYXY	96.5	San Mateo	KBAY	100.3	KWGF	100.9	KPAY-FM	105.5	Basalt		KXRC	93.7	KMTS	92.7
KSON-FM	97.3	KCSM	Seaside		Travis Air Force Base		KFMF	106.3	KQIX	100.1	KQZR	102.5	KQIX	100.1
KFM	98.1	KSOL	107.7	KMBY	107.1	KVIK	91.5	KVIP-FM	107.1	KREX-FM	102.3	Crested Butte	KREX-FM	102.3
KFMB-FM	100.7	San Pedro		Shafter		Trinity Center		Weed		Boulder		KREX-FM	KSPN	105.5
KGB	101.5	KFOX	93.5	KMGH	97.7	KTMT	100.9	KVIP-FM	92.7	KGNU	88.5	Del Norte	Grand Junction	
KSDO-FM	102.9	San Rafael		Simi		Tulare		KSQU	100.9	KPKE	92.1	KALQ	KCIC	88.5
KJQY	103.7	KSRH	88.1	KNJO	107.1	KBOS	94.4	KEDY	103.1	KBVL	94.7	Delta	KJOL	90.3
KCBQ-FM	105.3	KTIM-FM	100.9	Solvang		KJUG	106.7	West Covina		KBCO	97.3	KDTA-FM	KMSA	91.3
KPRI	106.5	KGO-FM	103.7	KCBX	90.9	Turlock		KBOB	98.3	KVOD	101.7	Denver	KREX-FM	92.3
San Fernando		Santa Ana		KSYV	96.7	KBDG	90.9	West Hollywood		KTCL	103.1	KHUM	KQIX	93.1
KGIL-FM	94.3	KWIZ-FM	96.7	Sonora		KCSS	91.9	KMAX	107.1	Breckenridge		KCFR	Greeley	
San Francisco		KYMA	106.3	KTUO	91.5	KMIX	98.3	West Sacramento		KPKE	92.1	KPKE	KUNC	91.5
KQED-FM	88.5	Santa Barbara		KROG	92.7	Twentynine Palms		KWHS	91.7	KOSI-FM	94.3	KYGO	KGRE	92.5
KPOO	89.5	KSLA	88.7	KQYN	95.7	Willits		KQYN	102.3	KLGT	102.3	KVOD	KGBS	96.1
KUSF	90.3	KCPB	89.5	Twin Peaks		Willits		KEAR	1105.5	Brush		KLIR	Cunison	
KALW	91.7	KCSB	91.9	KCNQ	96.7	Willits		Willows		KCNQ	107.1	KOSI	KWSB	91.9
KLHT	93.3	KDB-FM	93.7	Ukiah		KIQS-FM	105.5	KIQS-FM	105.5	Buena Vista		KOAQ	KREX-FM	96.7
KSAN	94.9	KTMS-FM	97.5	KQYN	96.7	Woodlake		KVRH-FM	106.3	KVRH-FM	106.3	KBRQ	KGUC-FM	98.3
KKHI-FM	95.7	KTYD	99.9	KRLT	100.1	KUFW	90.5	Burlington		KBPI	105.9	KBPI	KVLE	102.3
KOIT	96.5	KZFR	102.9	KZFR	102.9	KEAR	104.9	Woodland		KNAB-FM	104.1	KAZI	Hotchkiss	
KRQR	97.3	KRUZ	103.3	Stanford		KZSU	90.1	KSFM	102.5	Canon City		KRLN-FM	KVNF	98.3
KABL-FM	98.1	Santa Clara		Stockton		KUIC	95.3	Yermo		KRLN-FM	103.9	KRDO-FM	Ignacio	
KQAK	98.9	KSCU	103.3	KARA	105.7	KUIC	95.3	KRXV	98.1	Carbondale	106.3	KRDO-FM	KSUT	91.3
KYUU	99.7	KARA	105.7	Santa Cruz		Ventura		Yosemite National Park				KDUR	La Junta	
KIOI	101.3	KZSC	88.1	KZSC	88.1	KBBY	95.1	KKHI-FM	92.1			KRSJ	KBLJ	92.1
KDFC	102.1	KUSP	88.9	KUSP	88.9	KHAY	100.7	KFOG	93.5			KIOX	Lake City	
KGO-FM	103.7	KEAR	93.5	KJAX	99.3	KOVA	105.5	Victorville		KMTS	107.1	KOB-FM	KREX-FM	106.3
KFOG	104.5	KSCO-FM	99.1	KFMR	100.1	KQLH	93.5	Yareka		Castle Rock		KRKY	Lakewood	
KITS	105.3	KAMB	106.3	KSTN-FM	107.3	KVWQ	103.1	KSOR	91.9	Colorado Springs	92.1	KRWV	KOSI	94.3
KMEL	106.1	Santa Maria		Sustanville		Visalia		KYRE	97.7	KWBI	88.7	KREX-FM	KPPL	107.5
KEAR	106.9	KEAR	94.3	KSUE-FM	92.7	KONG-FM	92.9	KVIP-FM	98.3	KFAA	89.7	East Salt Creek	Lamar	
San Jose		KXFM	99.1	Taft	103.9	Walnut		KTMT	100.9	KEPC	90.5	KQIX	KANZ	91.7
KLEL	89.3	KXFM	102.5	Tahoe City		KSAC	90.1	Yuba City	103.9	KRCC	91.5	Estes Park	KSEC	93.3
KSJS	90.7	Santa Monica		KHTX	100.9	Walnut Creek		Yucaipa		KSPZ	92.9	KVOD	Leadville	
KSJO	92.3	KCRW	89.9	Tehachapi		KDFM	92.1	KCAL-FM	98.3	KILO	93.9	KLIR	KLMC	93.5
KOME	98.5	KSRF	103.1	KTPI	103.1	KSAN	94.9			KRDO-FM	95.1	Evergreen	KRDO-FM	103.1
KBAY	100.3	Santa Paula		Temecula		KKHI-FM	95.7			KKFM	96.5	KPKE	KRQY	107.1
KEZR	106.5	KKBZ	96.7	KRTM	88.9	KOIT	96.5			KKCS	101.9	Fort Collins	Longmont	
San Luis Obispo		Santa Rosa		Thousand Oaks		KCEQ	100.5			KVOD	103.9	KCSU	KCDG	90.7
KCBX	90.1	KBBF	89.1	KUSC	88.3	KIOI	101.3	Alamosa	88.7	Cortez		KTCL	KLMO-FM	104.3
KCPR	91.3	KCLB	91.9	KCPB	91.1	KFOG	104.5	KASZ	90.9	KISZ	97.9	KVOD	Loveland	
KDDB	92.3	KZST	100.1	KNJO	92.7	Watsonville		KALQ	93.5	KRTZ	98.7	KCOL-FM	KLOV-FM	102.3
KZOZ	93.3	KVRE	101.7	Torrance		KAMB	103.1	Aspen		KOB-FM	104.9	Fort Morgan	Manitou Springs	
KEAR	94.3	Saratoga		KNHS	89.7	Weaverville		KSPN	97.7	KRWV	106.3	KBRU	KCME	88.1
KUNA	96.1	KBAY	100.1	Tracy		KXEZ	92.7	KQIX	100.1	Craig		Glenwood Springs	KCME	88.9

KILO	102.7	KREX-FM	95.9	WERB	97.3	WSLX	91.9	WSEA	93.5	WWUS	104.7	WAFG	90.3	WAIV-FM	96.9
Mesa		Rocky Ford		Bridgeport		New Haven		Hockessin		Blountstown		WHYI	100.7	WQIK	99.1
KQIX	105.5	KAVI-FM	95.9	WPKN	89.5	WYBC	94.3	WZZE	88.7	WRTM	102.3	WSHE	103.5	WIVY	102.9
Minutun		Salida		WEZN	99.9	WPLR	99.1	Milford		Boca Raton		WAXY	105.9	WCRJ-FM	107.3
KVMT	99.3	KVRH-FM	92.1	Brookfield		New London		WAFL	97.7	WWOG	88.1	WWJF	106.7	Jensen Beach	
Montrose		KCOL-FM	103.1	WRKI	95.1	WCNI	91.1	Newark		WKQS	99.9	Fort Myers		WHLG	102.3
KKKK	94.1	Security		Cornwall		WTYD	100.9	WHYY	89.3	Bonifay		WSFP	90.1	Jupiter	
KWDE	96.1	KWYD	105.5	WKKA	90.9	Norwalk		WXDR	91.3	WTBB	97.7	WSOR	95.3	WVSI-FM	96.7
KREX-FM	100.1	Silverthorne		Danbury		WLYQ	95.9	Rehoboth Beach		WINK-FM	96.9	WINK-FM	96.9	Key West	
KQIX	107.1	KVMT	103.9	WJAR	88.5	Norwich		WGMD	92.7	WLEQ	95.9	WHEW	101.9	WFYN	92.5
Morrison		Silverton		WXCi	91.7	WNPR	89.1	Seaford		Boynon Beach		Fort Myers Beach		WVFK	95.5
KWBI	91.1	KDRW	103.9	WDAQ	98.3	WCTY	97.7	WSUX	98.3	WRMB	89.3			WMCU	102.3
New Castle		KRSJ	105.5	Derby		Somers		Wilmington		Bradenton		Fort Pierce		WIS	107.1
KMTS	95.3	Steamboat Springs		WLNV	90.1	WDJW	89.7	WMPH	91.7	WDUV	103.3	WQCS	88.3	La Belle	
Nucia		KSBT	96.7	Fairfield		Stamford		WSTW	93.7	Cape Coral		WQVW	95.5	WVHG	92.1
KKKK	99.3	KRDO-FM	95.1	WVOF	88.5	WYRS	96.7	WJBR-FM	99.5	WIZD	103.9	WRCC	98.7	Lake City	
KREX-FM	101.7	KVOD	98.3	WSHU	91.1	Stonington				Clearwater		Fort Walton Beach		WNFQ	94.5
Oak Creek		KFMU	105.5	Germantown		WFAN	102.3			WMGX	95.7	WFTW-FM	99.3	Lakeland	
KFMU	103.9	Sterling		WFME	93.5	Storrs		DIS. OF COLUMBIA		WQXM	97.9	Gainesville		WCIE	91.1
KQIX	98.3	KSTC-FM	104.7	Groton		WHUS	91.7	Washington		WAMU	88.5	Clewiston		WVFM	94.1
Paonia		KVRS	105.5	WQGN	105.5	Wallingford		WPFW	89.3	WDCU	90.1	WAFB	106.3	Leesburg	
KVNF	90.9	Telluride		Hamden		WWEB	89.9	WETA-FM	90.9	WEEK	90.1	Cocoa		WHLY	106.7
KKKK	99.3	KOTO	91.7	WHAQ	88.3	Waterbury		WKYS	93.9	WEZY-FM	99.3	WRUF-FM	103.7	Lehigh Acres	
KREX-FM	103.9	KREX-FM	103.9	WKCI	101.3	WWYZ	92.5	WASH	97.1	Cocoa Beach		WYKS	105.5	WOOJ-FM	107.1
Parachute		Trinidad		Hartford		WIOF	104.1	WHUR	96.3	WCKS	101.1	Goulds		Live Oak	
KMTS	96.7	KCRT-FM	92.7	WJMJ	88.9	West Hartford		WASH	97.1	WRKT-FM	104.1	WGLY	98.3	WQHL	98.1
KQIX	100.1	Uruvan		WRTC	89.3	WPBH	88.3	WMZQ	98.7	Coral Bables		Green Cove Springs		Maccleenny	
Placerville		KSFI	103.1	WTOQ	89.9	WUOH	91.3	WGAY-FM	99.5	WVUM	90.5	WSVE	92.7	WBFK	92.1
KOTO	105.5	KREX-FM	107.1	WLVI	93.7	West Haven		WVOR	100.3	WYOR	105.1	Havana		Madison	
Pueblo		Vail		WKSS	95.7	WNHU	88.7	WVDC-FM	101.1	Crestview		WHFL	104.9		104.9
KTSC	89.7	KVMT	94.3	WTIC-FM	96.5	Westport		WGMS-FM	103.5	WAAZ	104.9	Hialeah		Marathon	
KCCY	97.9	KVMT	104.7	WDRC-FM	102.9	WWPT	90.3	WRQX	107.3	Crystal River		WCMQ-FM	92.1	WMUM	94.5
KROY	98.9	Windsor		WHCN	105.9	FWDJF	107.9			WRYO	98.5	High Springs		Marco	
KYNR	99.9	KUAD	99.1	WCCC-FM	106.9	Willimantic		FLORIDA		Daytona Beach			104.9	WEIB	101.1
KZLO	100.7	Woody Creek		Middlefield		WECS	90.1	Apopka		WVTV	94.5	Holiday		Marianna	
KRMX-FM	107.1	KREX-FM	102.3	WPBH	90.5	WNOU	98.3	WTLN-FM	95.3	WDOQ	101.9	WHBS	106.3	WJAO	100.9
Rangey		Wray		Middletown				Arcadia		DeFuniak Springs		Homosassa Springs		Melbourne	
KREX-FM	102.3	KQLS	95.3	WESU	88.1	DELAWARE		WOKD	98.3	WOUH	103.1	WXCX	95.3	WFIT	95.6
KQIX	107.1	KRQZ	98.3	WIHS	104.9	Bethany Beach		Atlantic Beach		De Land		Immokalee		WYRL	102.4
Rifle		Yuma		Monroe		WWTR	95.9	WFYV	104.5	WELE-FM	105.9	WIKX	98.3	WCFB	106.4
KMTS	96.7	KJCO	100.9	WMNR	88.1	Camden		Avon Park		Destin		Jacksonville		WLLV	107.1
KQIX	100.1	KJCO	100.9	New Britain		WRBS	100.1	WWOJ	106.3	WMMK	92.1	WJCT-FM	89.9	Miami	
KREX-FM	103.1			WFGS	97.9	Dover		Belle Glade		Dunnellon		WFAM	91.1	WDNA	88.9
Roaring Fork		CONNECTICUT		WRCH	100.5	WDSO	94.7	WSWN-FM	93.5	WTRS-FM	102.3	WJAX-FM	95.1	WMCU	89.7
KQIX	94.3	Berlin		New Canaan		Georgetown		Big Pine Key		Fort Lauderdale gm		WKTZ-FM	96.1	WLRN-FM	91.2

WTMI	93.1	WJLO	100.7	WMNX	95.9	WUOG	90.5	Cartersville		WKIG-FM	106.3	Milledgeville		WXRS-FM	103.9
WAIA	97.3	WTKX	101.5	WBGM	98.9	WNGC	95.5	WCCV	91.7	Gordon		WXGC	88.9	Thomaston	
WEDR	99.1	WOWW	107.3	WOWD	103.1	WAGQ	104.7	Chatsworth		WIZY-FM	107.1	WKZR	102.3	WTZO	95.3
WLYF	101.5	Plantation Key		WGLF	104.1	Atlanta		WQMT	99.3	Greensboro		Moultrie		Thomasville	
WQBA-FM	107.5	WXOS	100.3	Tampa		WRAS	88.5	Claxton		WGRG	103.9	WMTM-FM	93.9	WTUF	107.1
Miami Beach		Pompano Beach		WMNF	88.5	WRFG	89.3	WCLA-FM	107.1	Griffin		Newman		Thomson	
WWWL	93.9	WCKO	102.7	WUSF	89.7	WABE	90.1	Cochran		WKEU-FM	97.7	WRNG	96.7	WTHO-FM	101.7
WINZ-FM	94.9	Port Charlotte		WFLA-FM	93.3	WREK	91.1	WVMG-FM	96.7	Hawkinsville		Ocilla		Tifton	
Milton		WEEJ	100.1	WYNF	94.9	WCLK	91.9	Columbus		WCEH-FM	103.9	WOWZ	97.7	WCUP	100.3
WXBM	102.7	Port St. Joe		WIQI	100.7	WZGC	92.9	WVOC	102.9	Hazlehurst		Perry		WABR	107.5
Mount Dora		WJST	93.5	WRBQ-FM	104.7	WPCB	94.9	WFXE	104.9	WVOH-FM	93.5	WPGA-FM	100.9	Toccoa	
WJYO	107.7	Punta Gorda		Titusville		WKLS-FM	96.1	WCGQ	107.3	Hinesville		Rockmart		WLET-FM	106.1
Naples		WQLM	92.7	WPIO	89.1	WSB-FM	98.5	Conyers		WBLU	92.1	WZOT	107.1	Toccoa Falls	
WRGI	93.5	WSOR	97.7	WAJX	98.3	WLTA	99.7	WMBW	100.5	Homerville		Rome		WRAF	90.9
WCVU	94.5	Quincy		Venice		WVEE	103.3	Cordele		WBTY	105.5	WKCX	97.7	Valdosta	
WGL	97.7	WWSD	101.7	WAMR-FM	92.1	WFAV		Jackson		WQTL	102.3	WVVS	90.9	WGOV-FM	92.5
New Port Richey		Riviera Beach		Vero Beach		WACG	90.7	Cornelia		WJGA-FM	92.1	Rossville		WLGA	95.9
WPSO	105.5	WNJY	94.3	WGYL	93.5	WCON-FM	99.3	Jesup		WSOJ	98.3	Roswell		WAF	101.1
Ocala		Safety Harbor		WAVW	105.5	WZLW	103.1	Cumming		WIFO	105.5	St. Marys	107.5	Vidalia	
WMFO	92.7	WOCR	92.1	West Palm Beach		WBBO FM	104.3	Dawson		WWCG	104.1	St. Simon's Island		WTCQ	97.7
WFUZ	93.7	St. Augustine		WHRS	90.7	WYMX	105.7	Bainbridge		Louisville		St. Marys	93.5	Warner Robins	
Okeechobee		WFOY-FM	97.7	WNGS	92.1	WJAD	97.3	Donalsonville		WPEH-FM	92.1	Sandersville		WRBN	101.7
WLMC	103.1	WMKM	105.5	WTML	102.3	Baxley		Douglas		Mabelton		Waycross		Washington	
Orlando		St. Petersburg		WEAT-FM	104.5	WBZ	94.5	WDMG-FM	99.5	WMBW	105.9	Savannah		WLOV-FM	100.1
WGAG	89.3	WQYK	99.5	WIRK-FM	107.9	Blackshear		WOKA-FM	106.7	Macon		Waycross		WLTE	102.5
WUCF	89.9	WKES	101.5	Williston		WKUB	104.9	Dublin		WMAZ-FM	99.1	WCHJ	88.5	WACL-FM	103.3
WMFE-FM	90.7	WWBA	107.3	Winter Haven		Blairsville		WKKZ	92.7	WDEN	105.3	WVHJ	91.1	WEAS-FM	93.1
WDBO-FM	92.3	Sarasota		WPCV	97.5	Blue Ridge		WQZY	95.9	WPEZ	107.9	WCHY	94.1	WGSF	95.5
WHOO-FM	96.5	WSRZ	102.5	Winter Park		WPPL	88.9	WUFF-FM	92.1	Manchester		WQCK	93.3	WJCL-FM	96.5
WKES	98.9	WKZM	105.5	WPRK	91.5	WWSI	100.7	Elberton		WQCK	93.3	WAEV	97.3	WJCL-FM	96.5
WDIZ	100.3	WMLQ	106.3	WLOQ	103.1	WPIQ	101.5	Ellijay		WQCK	93.3	WZAT	102.1	WJCL-FM	96.5
WBJW	105.1	Sebring		Palatka		WWSI	100.7	WWRK	92.1	Marietta		WZAT	102.1	WJCL-FM	96.5
WBNF	99.9	WWSK	105.5	WWSK	105.5	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
Palm Beach		Starke		Starke		WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
WRMF	97.9	WTLG	88.3	WTLG	88.3	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
Panama City		WPXE-FM	106.3	WPXE-FM	106.3	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
WKGC-FM	90.7	WRIT	92.7	WRIT	92.7	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
WPAP	92.5	WGNF	98.5	WGNF	98.5	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
WNE	98.5	WGPX	88.5	WGPX	88.5	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
WPFM	107.9	Tallahassee		Tallahassee		WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
Pensacola		WUWF	90.5	WUWF	90.5	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
WPCS	89.3	WFSU	91.5	WFSU	91.5	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5
WMEZ	94.1	WCSN	94.9	WCSN	94.9	WWSI	100.7	WWRK	92.1	WZAT	102.1	WZAT	102.1	WJCL-FM	96.5

KOMO	93.1	KBXL	94.1	KPKY	94.9	Blvidere		WLAK	93.9	WLLR	101.3	KWK-FM	106.5	WIUS	98.3
KMAI	93.9	KOZQ	103.1	KRBU	102.5	WYBR	104.9	WLS-FM	94.7	East St. Louis		Greenville		WIUM	91.5
KUMU-FM	94.7	Coeur D' Alene		Preston	96.7	Benton		WMET	95.5	WMRY	101.1	WGRN	89.5	WKAI-FM	100.1
KAIM-FM	95.5	KIOB	103.1	KALL-FM	102.3	WQRL	106.3	WBBM-FM	96.3	Edwardsville		Harrisburg		WJEQ	100.1
KSHO-FM	96.7	Emmett		KSFI	105.5	Bloomington		WNIB	97.1	WSIE	88.7	WBEQ-FM	99.9	Manion	
KDUK	97.5	KMFE	101.7	Rexburg		WESN	88.1	WLUP	97.9	Effingham		Havana		WDDD	100.3
Kahala		Grangeville		KRIC	90.1	WBNQ	101.5	WFMT	98.7	WCRC	95.7	WDUK	99.3	Mattoon	
KTUH	89.7	KORT-FM	92.7	KADQ	94.3	Cahokia		WUSN	99.5	WBFG	97.7	Highland Park		WLKL	89.9
KSHO-FM	96.3	Idaho Falls		KKOT	98.3	WRTE	89.5	WLOO	100.3	WКСI	102.3	WVXV	103.1	WLBH-FM	96.1
Kaneohe		KIBQ	91.9	Rupert		Canton		WKQX	101.1	Elgin		Hinsdale		Mendota	
KDUK	98.3	KID-FM	96.1	KNAQ	92.1	WBYS-FM	98.3	WFYR	103.5	WEPS	90.9	WHD	88.5	WGLC-FM	100.1
Kealahou		KQPI	99.1	Salmon		WBOD	100.9	WJEZ	104.3	WJKL	94.3	Hoopeston		Metropolis	
KOAS	92.1	Jerome		KSRA-FM	92.7	Carbondale		WGCI	107.5	Elmhurst		WHPO	100.9	WRIK	98.3
Lihue		KFMA	102.9	Sandpoint		WSIU	91.9	Chillicothe		WRSE	88.7	Jacksonville		Moline	
KUAD	92.7	Kamiah		KPNP	95.3	WCIL-FM	101.5	WTRR	94.3	Elmwood Park		WEAI	100.5	WXLV	96.9
KIPO FM	93.5	KMBI-FM	90.9	Soda Springs	100.1	Carlinville		WHOW-FM	95.9	WTFM	105.9	Jerseyville		Monmouth	
Makawao, Maui		KORT-FM	92.1	KISN	102.3	WIBI	91.1	Columbia		WTPC	89.7	WJBM-FM	104.1	WMOI	91.7
KVIB	94.3	Kellogg		KSFI	105.5	Carmi		WCBW	104.9	Evanston		Joliet		Monticello	
Maui		KCFJ	104.3	KRSP-FM	106.3	WRUL	97.3	Crest Hill		WNUR	89.3	WAJP	93.5	WVJ	105.5
KAOI	96.7	Lewiston		KSOP-FM	107.1	Carthage		WCCQ	98.3	WOJO	105.1	WLLI	96.7	Morris	
Waialua		KLHS	88.9	Sun Valley		WCAZ-FM	92.1	Crete		Fairfield		Kankakee		WCSJ FM	104.7
KTUH	91.3	KOZE-FM	96.7	Centralia		WRXX	95.3	WTAS	102.3	WFIW-FM	104.9	WKOC	88.3	Morton	
Wailuku		KJLC	97.7	Champaign		WRXN		Danville		Flora		WBYG	99.9	WTAZ	102.3
KAOI	95.1	KMBI-FM	100.9	WPCD	88.7	WPCD	88.7	WNOI	103.9	WNOI	103.9	Kewanee		Mount Carmel	
Waipahu		KMOK	106.9	WEFT	90.1	WDLN	102.1	Flossmoor		WFFS	92.1	WJRE	92.1	WVJC	89.1
KULA	92.3	Moscow		WBGL	91.7	Decatur		WFFF	88.5	Freeport		La Grange		WYER-FM	94.9
IDAHO		KUOI	89.3	WLRW	94.5	WJMU	89.5	WJMU	89.5	Lake Forest		WLT	88.1	Mount Vernon	
Blackfoot		KUID	91.7	WDWS-FM	97.5	WDZQ	95.1	WMBI-FM	88.3	WMMX	88.9	WMLA	92.7	WMIX-FM	94.1
KBLL-FM	97.7	KRPL-FM	103.9	Charleston		WSOY-FM	102.9	WFS	92.1	Lansing		WLNK	106.3	Mount Zion	
Boise		KOKZ	99.3	WEIU	88.9	De Kalb		WXXQ	98.5	La Salle		WJAK	99.3	Murphysboro	
KBSU	91.3	Nampa		WEIC-FM	92.1	WNIU	89.5	Galesburg		WVVC	90.5	Lawrenceville		WTAO	104.9
KBBK	92.3	KFXD-FM	94.9	Chicago		WDEK	92.5	WGBQ	92.7	WVVC	90.5	WVVC	90.5	Naperville	
KBOI-FM	97.9	KBNY	96.9	WCRX	88.1	Des Plaines		WYEN	106.7	WVVC	90.5	WVVC	90.5	WONC	89.1
KIDQ	104.3	New Plymouth		WSSD	88.1	Dixon		WIXN-FM	101.7	WVVC	90.5	WVVC	90.5	Normal	
KJOT	105.1	KIZN	93.1	WHPK	88.3	Downers Grove		WDGC	88.3	WVVC	90.5	WVVC	90.5	WGLT	89.1
Bonniers Ferry		Orofino		WZRD	88.3	Dundee		WVVC	88.3	WVVC	90.5	WVVC	90.5	WJHN	96.7
KMBI-FM	94.3	KLER-FM	95.3	WBHI	88.5	WVVC	88.3	WVVC	88.3	WVVC	90.5	WVVC	90.5	Oak Park	
KKPL	100.9	Payette		WCYC	88.7	WVVC	88.3	WVVC	88.3	WVVC	90.5	WVVC	90.5	WBMX	102.7
KEZE-FM	102.3	KWBJ	100.1	WLUW	88.7	WVVC	88.3	WVVC	88.3	WVVC	90.5	WVVC	90.5	Olney	
KHQ-FM	103.1	Pierce		WOUI	88.9	WVVC	88.3	WVVC	88.3	WVVC	90.5	WVVC	90.5	WSEI	92.9
KXLY-FM	107.1	LKER-FM	95.9	WVVC	88.3	WVVC	88.3	WVVC	88.3	WVVC	90.5	WVVC	90.5	Ottawa	
Burley		Pocatello		WVVC	88.3	WVVC	88.3	WVVC	88.3	WVVC	90.5	WVVC	90.5	WRXK	95.3
KMVC	98.3	KBGL	89.5	WVVC	88.3	WVVC	88.3	WVVC	88.3	WVVC	90.5	WVVC	90.5	Pana	
Caldwell		KZBQ	93.7	WVVC	88.3	WVVC	88.3	WVVC	88.3	WVVC	90.5	WVVC	90.5	WKXX	100.9

Paris		WRWC	103.1	WETN	88.1	WCSI-FM	101.5	WGVE	88.7	WKVI-FM	99.3	Paoli		WISU	89.7
WACF	98.5	Romeoville		Wilmington		WWVY	104.9	Gaston		Kokomo		WUME	95.3	WHMD	90.5
Park Forest		WLRA	88.1	WHDND	105.5	Connorsville		WDHS	90.9	WHSK	89.1	Pendleton		WTHI-FM	99.9
WRHS	88.1	Salem		Winnebago		WCNB-FM	100.3	Goshen		WZWZ	92.7	WEEM	91.7	WVTS	100.7
Park Ridge		WJBD-FM	100.1	WYFE	95.3	Covington	*90.3	WGCS	91.1	WWKI	100.5	Peru		WPFR	102.7
WMTH	88.5	Savanna		Winnetka		WVWV	103.1	WZOW	97.7	Lafayette		WARU-FM	98.3	WZZQ	107.5
Pekin		WCCI	100.1	WNTH	88.1	Crawfordsville		Greencastle		WJEF	91.9	Plainfield		Valparaiso	
WCIC	91.5	Shelbyville		Woodstock		WLFO	103.9	WGRE	91.5	WXUS	93.5	WLXIR	98.3	WVUR	95.1
WGLO	95.3	WSHY-FM	104.9	WXRDR	105.5	WNDY	106.3	WJNZ	94.3	WAZY	96.5	Plymouth		WLJE	105.5
WKQA	104.9	Skokie		Zion		Crown Point		Greenfield		WASK-FM	105.3	WVNZ	94.3	Vevay	
Peoria		WCLR	101.9	WKZN-FM	96.9	WWJY	103.9	WIKS	99.5	La Porte		Portland		WAVV	95.9
WCBU	89.9	Springfield				Danville		Greensburg		WCOE	96.7	WPGW-FM	100.9	Vincennes	
WKZW	93.2	WQNA	88.3	INDIANA		WGRT	107.1	WTRE-FM	107.3	Lebanon		Princeton		WVUB	91.1
WWCT	105.7	WSSR	91.9	Alexandria		Decatur		Hammond		WNON	100.9	WRAY-FM	98.1	WRTB	96.7
WSWT	106.9	WNNS	98.7	WAXT	96.7	WADM-FM	92.7	WYCA	92.3	Linton		Rensselaer		Wabash	
Peru		WVEM	101.9	Anderson		Earl Park		Hartford City		WQTY	93.5	WPUM	90.5	WKUZ	95.9
WIVQ	100.9	WDBR	103.7	WLHN	97.9		98.3	WWHC	93.5	Logansport		WJCK	97.7	Warsaw	
Pittsfield		WFMB	104.5	Angola		Elkhart		Howe		WSAL-FM	102.3	Richmond		WRSW-FM	107.3
WBBA-FM	97.7	Sterling		WEAX	88.3	WVPE	88.1	WHWE	89.7	Lowell		WOLK	96.1	Washington	
Plano		WJVM	94.3	WLKI	100.1	WYEZ	100.7	Huntingburg		WZVN	107.1	WRIA	101.3	WFML	106.5
WSPY	107.1	Stearlor		Auburn		WFRN	104.7	WBDC	100.9	Madison		WROI	92.1	West Terre Haute	
Pontiac		WLAX	97.7	WIFF-FM	105.5	Elwood		Huntington		WCJC	96.7	Rockville		WWVR	105.5
WPOK-FM	103.1	Sullivan		Aurora		WBMP	101.7	WVSH	91.9	Marion-Martinsville		WAXI	104.9	IOWA	
Princeton		WSAK	106.3	WSCH	99.3	Evansville		WHUZ	103.1	WMI	106.9	Rushville		Argona	
WZOE-FM	98.3	Summit		Batesville		WNIN-FM	88.3	Indianapolis		WCBK	102.3	WRCR	94.3	KLGA-FM	92.7
Quincy		WARG	88.9	WRBI	103.9	WPSR	90.7	WICR	88.7	Michigan City		Salem		Ames	
WWQC	90.3	Taylorville		Bedford		WUEV	91.5	WJEL	89.3	WEFM	95.9	WLSM-FM	98.9	WOI FM	90.1
WQCY	99.5	WEEE	92.7	WBIF	105.5	WIKY	104.1	WIAN	90.1	Monticello		Scottsburg		KPGY	91.5
WGEM-FM	105.1	Tuscola		Bloomington		WYNG-FM	105.3	WBDG	90.9	WWET	95.3	WMP	100.9	KEZT	104.1
Rantoul		WITT	93.5	WGTC	92.3	Fort Wayne		WEDM	91.1	Muncie		WDA	90.5	KCCQ	107.1
WRTL-FM	95.3	Urbana		WBWB	96.7	WLHI	88.3	WRFT	91.5	WWDA	90.5	Seymour		Ankeny	
River Grove		WILL-FM	90.9	WBU	103.7	WBNI	89.1	WNAF	93.1	WWHI	91.3	WJCD-FM	93.7	KJJY	106.3
WRRG	88.9	WKIO	103.9	Bluffton		WBCL	90.3	WFBO	94.7	WBST	92.1	Shelbyville		Atlantic	
Robinson		WPGU	107.1	WCRD	100.1	WFWS	95.1	WFBQ	95.5	WBC-FM	104.1	WENS	97.1	KJAN-FM	103.7
WTAY-FM	101.7	Vandalia		Boonville		WMEE	97.3	WXTZ	103.3	WLB	104.9	South Bend		Bloomfield	
Rochelle		WKRVR	107.1	WBNL-FM	107.1	WEEV	101.7	WJAJ	104.5	New Albany		WETL	91.7	KXOF	106.3
WRHL-FM	102.3	Virde		Brazil		WXKE	103.9	WTLC	105.7	WNAS	88.1	WNDU FM	92.9	Boone	
Rockford		WRVI	96.7	WBDJ	97.7	Frankfort			107.9	New Castle		WTHQ	101.5	KWBG-FM	98.3
WMBI-FM	91.1	Waiseka		Carmel		WSHW	99.7	Jasper		WMDH	102.5	WME	103.1	KFGQ-FM	99.3
WZOK	97.5	WGFA-FM	94.1	WHJE	91.3	Franklin		WITZ-FM	104.7	North Manchester		WXMG	103.9	Burlington	
WQFL	100.9	Waukegan		Chesterton		WFCI	89.1	Jeffersonville		WBKE	89.5	Spencer		KDWD	93.5
Rock Island		WXLC	102.3	WDSO	89.7	WIFN	95.9	WQMF	95.7	North Vernon		Sullivan	92.7	KGRS	107.3
WVIK	90.1	West Frankfort		Columbia City		French Lick		Kendallville		WOCH-FM	106.1	WNDI-FM	95.3	Carroll	
WHBF-FM	98.9	WFRX-FM	97.7	WKSJ	106.3	WFLQ	100.1	WAWK-FM	93.3	Norte Dame		Terre Haute		KKRL	93.7
Rockton		Wheaton		Columbus		Gary		Knox		WSND	88.9				

Cedar Falls		KUCB	89.3	Iowa City		KDLS-FM	104.9	Baxter Springs		Hiawatha		Oakley		KSWC	100.3
KHKE	89.5	KMGK	93.3	KSUI	91.7	Red Oak		KBLT	107.1	KNZA	103.9	KANZ	89.7	KWKS	105.5
KUNI	90.9	KGGG	94.9	KRNA	93.9	KOAK-FM	95.3	Beloit		Hillsboro		Oberlin			
Cedar Rapids		KDMI	97.3	KKRQ	100.7	Sheldon		KVSV-FM	105.5	KHHS	88.1	KBNF	101.1	KENTUCKY	
KCKK	88.3	KLYF	100.3	Iowa Falls		KIWA-FM	105.5	Chanute		Hoisington		Osage City		Albany	
KWMR	88.9	KFGO-FM	101.7	KIFG-FM	95.3	Sioux Center		KQSM	105.5	KHOK	100.7	KZOC	92.7	WANY-FM	106.3
KOJC	89.7	KRNO	102.5	Keokuk		KDCR	88.5	Clay Center		Hutchinson		Ottawa		Ashtland	
KCOE	90.5	Dubuque		KIMI	95.3	KVDB-FM	94.3	KCLY	100.9	KHCC	90.1	KTJO	88.1	WAMX	93.7
WMT-FM	96.5	KFMD	92.9	Knoxville		Sioux City		Colby		KSKU	102.1	KKKK	95.7	Barbourville	
KHAK-FM	98.1	KLXL	102.3	KTAV	92.1	KMSC	88.3	KANS	90.5	KHUT	102.9	Parsons		WYWW-FM	93.5
KQCR	102.9	KLYV	105.3	Le Mars		KWIT	90.3	KTCC	91.9	Independence		KLKC-FM	93.5	Bardstown	
KTOF	104.5	Eldridge		KZZL	99.5	KBCM	95.5	KQLS	100.3	KIND-FM	101.7	Pittsburg		WOKH	96.7
Centerville		KUNI	102.7	Manchester		KSEZ	97.9	Columbus		KIOL	99.3	KDBQ	96.9	Beattyville	
KMGO	98.7	Emmetsburg		KOUR-FM	93.5	KTFC	103.3	KCCU	98.3	Junction City		Pratt		WLJC	102.3
Chariton		KEMB	98.3	Maquoketa		Spencer		Concordia		KJCK-FM	94.5	KWLS-FM	93.1	Benton	
KYRS	105.5	Estherville		KMAQ-FM	95.3	KRGS	104.9	KVCO	88.3	KANSAS City		Russell		WCBL-FM	102.3
Charles City		KILR-FM	95.9	Marshalltown		KICD-FM	107.7	KCKS	95.3	KFKF	94.1	KRSL-FM	95.9	Bowling Green	
KCHA-FM	95.9	Fairfield		KFJB-FM	101.1	Storm Lake		Derby		KUDL	98.1	Salina		WKYU	98.9
Cherokee		KBCT	95.9	Mason City		KAYL-FM	101.5	KYMG	95.9	Larned		KYEZ	93.7	WLBJ-FM	98.7
KCHE-FM	102.3	Forest City		KNWS-FM	93.5	Twin Lakes		Dodge City		KANS-FM	96.7	KSKG	99.9	WDNS	98.7
Claninda		KIOW	102.3	KCMR	98.3	KTBL	105.5	KINF	91.9	Lawrence		Scott City		Brandenburg	
KQIS	106.3	Fort Dodge		KLSS	106.1	Washington		KTTL	93.9	KJHK	90.7	KULL	94.5	WMMG	93.5
Clarion		KICB	88.1	Mount Pleasant		KCII-FM	95.3	KDCK	95.5	KANU	91.5	Seneca		Cadiz	
KRIT	96.9	KTPR	91.1	KILJ	105.5	Waterloo		KANZ	99.3	KLZR	105.9	KNDY-FM	92.1	WKDZ-FM	106.5
Clear Lake		KSMX	92.1	Mount Vernon		KBBG	88.1	El Dorado		Leavenworth		Topeka		Campbellsville	
KZEV	103.1	KKEZ	94.5	KRNL	89.7	KNWS-FM	101.9	KSPG	99.3	KZZC	98.9	KZOC	92.1	WCKQ-FM	103.9
Clinton		KRGS	103.1	Muscatine		KCNK	105.7	Elkhart		Liberal		WIBW-FM	97.3	Carrollton	
KSAY	96.1	Fort Madison		KFMH	99.7	KFMW	107.9	KANZ	98.3	KANZ	98.3	KDVV	100.3	WIKI	100.1
KNJY	97.7	KBKB-FM	101.7	Newton		Waukon		Elsworth		KSLs	101.5	KTPK	106.9	Cattlettsburg	
Council Bluffs		Garnaville		KLVN	95.9	KNEI-FM	103.9	KLFQ	92.7	Emporia		KMAJ	107.7	WCAK	92.7
KIWR	89.7	KCTN	100.1	Oelwein		KWAR	89.1	KLRF	104.9	Fort Scott		Tribune		Central City	
KQKQ	98.5	Garner		KOEL-FM	92.3	KWAY-FM	99.3	KOMB	103.9	Garden City		KANZ	98.3	WKYA	101.9
Creston		KDCR	90.7	Osage		Webster City		KOWC-FM	95.9	Manhattan		Washington		Columbia	
KITR	101.7	Grinnell		KOSG	92.7	KOWC-FM	95.9	West Des Moines		KANZ	91.1	KCLY	100.3	WAIN FM	97.5
Davenport		KDJC	88.5	Osceola		KWDM	88.9	KBUF-FM	97.7	KMKF	101.7	Wellington		Corbin	
KALA	88.5	KJJC	107.1	KJJC	107.1	KWDM	88.9	Goodland		KSDB	88.1	KZED	93.5	WYGO-FM	99.5
KUNI	94.5	KWGG	104.9	Oskaloosa		KANSAS		Great Bend		KMBF	101.7	Wichita		WCTT-FM	107.1
KIK	103.7	Harlan		KIGC	88.7	Arkansas City		KBUZ	106.5	Marysville		KMUW	89.1	Cynthiana	
KRVR	106.5	KNOD	105.5	KBOE-FM	104.9	KANZ		KBJC	91.9	KNDY-FM	103.1	KSOQ	91.1	WCYN-FM	102.9
Decorah		Humboldt		Ottumwa		Ashland		KANZ	98.3	Mc Pherson		KICT	95.1	Danville	
KLCD	89.5	KHBT	97.7	KLEE-FM	97.7	Baldwin		KJLS	103.3	KNEX-FM	96.7	KBRA	97.9	WMGE	101.1
Denison		Ida Grove		Pella		KCUJ	89.1	KVGB-FM	104.3	Ness City		KFDI-FM	101.3	Elizabethtown	
KDSN-FM	107.1	KIDA	92.7	KXJX	103.3	Perry				KANZ	98.3	KEYN	103.7	WQXE	100.1
Des Moines		Independence		KOUR-FM	95.3					Newton		KKYD	107.3	Elkhorn City	
KDPS	88.1									KOEZ	92.3	Winfield		WECL	103.1

Erlanger		WKNJ	89.3	WKYM	101.7	WLCK-FM	99.3	WFEX	92.7	KBIU	103.7	Oakdale		Bangor	
WHKK	100.9	WHOP-FM	98.7	Morehead		Somers	89.9	Columbia		Lake Providence		KGBM-FM	104.9	WHCF	88.5
Falmouth		WKOA-FM	100.3	WMKY	90.3	WSCC	90.7	KCTO-FM	103.1	KLPL-FM	92.7	Oak Grove		WHSN	89.3
WIOK	95.3	Jackson		WMOR-FM	92.1	WSEK	96.7	Crowley		Laplace		KWCL-FM	96.7	WMEH	90.9
Fort Campbell		WJSN	97.7	Morganfield		Stanford		KAJN-FM	102.9	WCKW	92.3	Opelousas		WPBC	92.9
WABD-FM	107.9	Jamestown		WMSK-FM	95.3	WRSI-FM	95.9	De Ridder		Leesville		KOGM	107.1	WBGW	97.1
Fort Knox		WJRS	104.9	Mount Sterling		Stanton		KEAZ	101.7	KJAE	92.7	Port Sulphur		Bath	
WWKK	105.5	Jeffersonton		WMST-FM	105.5	WSKV	104.9	Donaldsonville		KVVP	105.5	KHAA	106.7	WMOS	95.3
Frankfort		WJYL	101.7	Munfordville		Tompkinsville		KSMI	104.9	Mansfield		Ruston		WIGY	105.9
WKYW	104.9	Jenkins		WLOC-FM	102.3	WTKY-FM	92.1	Eunice		KJVC	92.7	KLPI	89.1	Biddeford	
Fulton		WIFX-FM	94.3	Murray		Vanceburg		KJJB	105.5	Many		KXKZ	107.5	WBSF	91.7
WWKF	99.3	Lebanon		WKMS	91.3	WKKF-FM	104.9	Farmerville		KWLTV	107.1	Shreveport		WBYC	94.3
Georgetown		WLSK	100.9	WAAW	103.7	Versailles		KWJM	92.7	Marksville		KDAQ	89.9	Boothbay Harbor	
WRVG	90.1	Leitchfield		Owensboro		WJMM	106.3	Ferriday		KWLB	97.7	KSCD	91.3		96.7
WAXU	103.1	WKHG	104.9	WKWC	90.3	Whitesburg		KFNV-FM	107.1	Minden		KMBQ	93.7	Brewer	
Glasgow		Lexington		WBKR	92.5	WXKQ	103.9	Franklin		KASO-FM	95.3	KROK	94.5	WGUY	100.9
WGGC	95.1	WBKY	91.3	WSTO	96.1	Winchester		KFRA-FM	105.5	Monroe		KEPT	96.5	Brunswick	
WOVO	105.5	WVLK-FM	92.9	Owingsville		WFMJ	100.1	Galliano		KNUU	88.7	KCOZ	100.1	WBOR	91.1
Grayson		WLAP-FM	94.5	WGGI	107.1			KZZQ	94.3	KNOE-FM	101.9	KRMD-FM	101.1	WKXA-FM	98.9
WKCC	96.7	WKQQ	98.1	Paducah		LOUISIANA		Grambling		KWEZ	104.1	Slidell		Calais	
WUGO	102.3	Liberty		WKYQ	93.3	Abbeville		KGRM	91.3	KNAN	106.1	WAIL	105.3		89.7
Greensburg		WKDO-FM	105.5	WDDJ	96.9	KASC	104.9	Hammond		Moreauville		Springhill		WQDY-FM	92.7
WGRK-FM	103.1	London		Paintsville		Alexandria		KSLU	90.9	KLIL	92.1	KTCC	92.7	Caribou	
Greenup		WWEL	103.9	WSPV-FM	98.9	KDEI	88.3	WTGI	103.3	Morgan City		Sulphur		WFST-FM	97.7
WLGC	105.5	Louisville		Paris		KQID	93.1	WHMD	107.1	KFXV	96.7	KTQQ	100.9	Dover-Foxcroft	
Greenville		WFPL	89.3	WNCW	96.7	KTIZ	96.9	Hayesville		Natchitoches		Tallulah		WDME-FM	103.1
WGKY	105.5	WUOL	90.5	Pikeville		KRRV	100.3	KLUV-FM	105.5	KNWD	91.7	KBYO	104.9	Eastport	
Hardinsburg		WFPK	91.9	WDHR	92.1	Bastrop		Houma		KDBH	97.7	Thibodaux		WSDH	91.7
WHIC-FM	94.3	WAMZ	97.5	Pineville		KTRY-FM	94.3	KHOM	104.1	New Iberia		KVFG	91.3	Ellsworth	
Harrodsburg		WKJJ	99.7	WTJM	106.3	KJBS	100.1	KCIL	107.1	KDEA	99.1	KXOR	106.3	WKSQ	94.3
WHBN-FM	99.3	WLRN	102.3	Prestonsburg		Baton Rouge		Jena		New Orleans		Ville Plate F		WDEA-FM	95.7
Hartford		WXLN	103.9	WOHY	95.5	WRKF	89.3	KJNA	99.3	WRBH	88.3	KVPI-FM	93.5	Farmington	
WLLS-FM	106.3	WVEZ	106.9	WPRT-FM	105.5	WBRH	90.3	Jennings		WBSN	89.1	West Monroe		WUMF	92.3
Hazard		Madisonville		Princeton		WPRG	91.1	KJEF-FM	92.7	WWNO	89.9	KYEA	98.3	WKTJ-FM	99.3
WSGS	101.1	WSOF	89.9	WPKY-FM	104.9	WAFB-FM	98.1	Jonesboro		WWOZ	90.7	Winnfield		Fort Kent	
Henderson		WKTG	93.9	Providence		WOXY	100.7	KJBQ	104.9	WTUL	91.5	KVCL-FM	92.1	WUFL	92.1
WKDQ	99.5	Manchester		WHRZ	97.7	WYNK-FM	101.5	Kaplan		WQUE	93.3	Winnboro		Gardiner	
WHKC	103.1	WWXL-FM	103.1	Richmond		WFMF	102.5	KMDL	97.7	WBYU	95.7	KMAR-FM	95.9	WABK-FM	104.3
Highland Heights		Mayfield		WEKU	88.9	Bayou Vista		Lafayette		WEZB	97.1			Gorham	
	89.7	WXID	94.7	WCRB-FM	101.7	KQKI	95.3	KRVS	88.7	WYLD-FM	98.5	MAINE		WMPG	91.7
Hindman		Maysville		Russellville		Benton		KSMB	94.5	WRNO-FM	99.5	Auburn		Houlton	
WKCB-FM	107.1	WFTM-FM	95.9	WAKO	101.1	KDKS	92.1	KTDY	99.9	WWNO-FM	101.1	WWAV	99.9	WHOU-FM	100.1
Hodgenville		Middlesboro		St. Matthews		Boyce		Lake Charles		WJAY	101.9	Augusta		Lewiston	
WKMO	106.3	WMIK-FM	92.7	WRKA	103.1	KBCE	102.3	KYKZ	96.1	New Roads		WSCL	92.1	WRBC	91.5
Hopkinsville		Monticello		Scottsville		Clinton		KLCL-FM	99.5	KQXL	106.3	WKCG	101.3	WAYU	93.9

WBLM	107.5	WRNV	89.7	Frederick		WYII	95.9	Deerfield		WXKS-FM	107.9	WTCC	90.7	WLEN	103.9
Lincoln		WNAV-FM	99.1	WFSI	99.9	WFSI	103.1	WGAJ	91.7	Milton		WAIC	91.9	WPOS	106.2
WLKN-FM	99.3	WFS	107.9	WFSI	103.1	Worton		Dudley		WMLN	91.5	WHYN-FM	93.1	WVAC	107.9
Machias		Arnold		Frostburg		WKHS	90.5	WNRC	95.1	Nantucket		WMAS-FM	94.7	Abion	
WALZ	95.3	WACC	89.9	WFRB-FM	105.3			Duxbury		WGTF	96.3	WNEK	97.5	WUFN	96.7
Millinocket		Baltimore		Glen Burnie		MASSACHUSETTS		WDBY	91.7	New Bedford P		WAQY	102.1	Allendale	
WKTR	97.7	WJHU	88.1	WBKZ	95.9	Acton		Easton		WJFD	97.3	Stockbridge		WVCV-FM	88.5
Norway		WEAA	88.9	WBEY	103.1	WHAB	89.1	WSHL	91.3	WMYS	98.1	WCWL	91.3	Alma	
WOXO-FM	92.7	WBJC	91.5	Hagerstown		Amherst		Falmouth		Newbury		Sudbury		WFYC-FM	104.9
Orono		WYST FM	92.3	WVMD	104.7	WFCR	88.5	WCIB	101.9	WQLI	88.7	WYAJ	88.1	Alpena	
WMEB	91.9	WPOC	93.1	WVMD	104.7	WAMH	89.3	Fitchburg		Newton		Taunton		WCML-FM	91.7
Portland		WRBS	95.1	WVMD	104.7	WAMH	89.3	WFMP	104.5	WZBC	90.3	WSENE	93.3	WATZ-FM	93.5
WMEA	90.1	WSPH	96.7	WVMD	104.7	WVMD	89.3	Framingham		North Adams		Tisbury		WHSB	107.7
WMGX	93.1	WYY	97.9	WVMD	104.7	WVMD	89.3	WDJM	91.5	WJW	91.1	WMVY	92.7	Ann Arbor	
WJBO	97.9	WLIF	101.9	WVMD	104.7	WVMD	89.3	WVBF	105.7	WMNB-FM	100.1	Walpole		WCBN	88.3
WPOR FM	101.9	WXYV	102.7	WVMD	104.7	WVMD	89.3	Franklin		Northampton		WRSR	91.5	WUOM	91.7
WGAN-FM	102.9	WBSB	104.3	WVMD	104.7	WVMD	89.3	WGAO	88.3	WQZQ	91.9	Waltham		WQB	102.9
Presque Isle		WRIX	106.5	WVMD	104.7	WVMD	89.3	Gardner		WHPM-FM	99.3	WBRB	91.7	WPAG-FM	107.1
WUPI	92.1	Bel Air		WVMD	104.7	WVMD	89.3	Gloucester	91.7	North Dartmouth		WCRB	102.5	Arbun Heights	
WTMS	96.1	WHFC	88.1	WVMD	104.7	WVMD	89.3	WVCA	104.9	WUSM	91.1	Wellesley		WAHS	89.5
WDHP	96.9	Berlin		WVMD	104.7	WVMD	89.3	Greenfield		Northfield	91.5	WZLY	91.5	Bad Axe	
WOZI	101.7	WOCQ	103.9	WVMD	104.7	WVMD	89.3	WCOZ	94.5			West Barnstable		WLEW-FM	92.1
WMEM	106.1	Bethesda		WVMD	104.7	WVMD	89.3	WJIB	96.9	Orleans		WKKL	90.7	Battle Creek	
Rockland		WLTT	94.7	WVMD	104.7	WVMD	89.3	WROR	98.5	WKZE-FM	104.7	Westfield		WDFF	95.2
WMCM	93.5	WHFS	102.3	WVMD	104.7	WVMD	89.3	WHUE-FM	100.7	Pittsfield		WSKB	89.5	WKFR	103.3
Rumford		Braddock Heights		WVMD	104.7	WVMD	89.3	WEEI-FM	103.3	WTBR	89.7	Weston		Bay City	
WWMR	96.3	WZYQ-FM	103.9	WVMD	104.7	WVMD	89.3	WBCN	104.1	WUPE-FM	95.9	WRSB	88.3	WCHW	91.3
Saco		WFRE	105.5	WVMD	104.7	WVMD	89.3	WRBB	104.9	WKTQ	101.7	West Yarmouth		WHNN	96.1
WPIG	95.9	Cambridge		WVMD	104.7	WVMD	89.3	WMJX	106.7	WBEC-FM	105.5	WGER	94.9	WGER	102.5
Sanford		WESP	106.3	WVMD	104.7	WVMD	89.3	Boxford		Plymouth		Williamstown		Beaverton	
WSME-FM	92.1	Catonsville		WVMD	104.7	WVMD	89.3	WBMT	88.3	WPLM-FM	99.1	WCFM	91.9	WCEO	97.7
Scarborough		WQSR	105.7	WVMD	104.7	WVMD	89.3	Bridgewater		Rockland		Winchendon		Benton Harbor	
WDOS	106.3	College Park		WVMD	104.7	WVMD	89.3	WBIM	91.5	WRPS	91.5	WINO	97.7	WHFB FM	99.9
Skowhegan		WMUC	88.1	WVMD	104.7	WVMD	89.3	Brockton		Salem		Winchester		Berrien Springs	
WTOS	105.1	Cumberland		WVMD	104.7	WVMD	89.3	WMCI	90.5	WMMW	91.7	WHSR	91.9	WAUS	90.7
Springvale		WROG	102.9	WVMD	104.7	WVMD	89.3	WCAV	97.7	Sandwich		Worcester		Big Rapids	
WNCY	91.1	WKGO	106.1	WVMD	104.7	WVMD	89.3	Brookline		WSDH	91.5	WCHC	89.1	WBRN-FM	100.9
Waterville		Easton		WVMD	104.7	WVMD	89.3	WBOS	92.9	Sheffield		WICN	90.5	WAAQ	102.3
WMHR	91.5	WCEI-FM	96.7	WVMD	104.7	WVMD	89.3	Cambridge		WBSL	91.7	WCUW	91.3	Birmingham	
WTVL-FM	98.3	Elkton		WVMD	104.7	WVMD	89.3	WMBR	88.1	South Hadlye		WSPS	96.1	WMJC	94.7
Westbrook		WOEL	89.9	WVMD	104.7	WVMD	89.3	WHRB	95.3	WMHC	91.5	WAAF	107.3	Bloomfield Hills	
WYNZ	100.9	Emmitsburg		WVMD	104.7	WVMD	89.3	Charlton		Southbridge		MICHIGAN		WBHF	88.1
		WMTB	89.9	WVMD	104.7	WVMD	89.3	WBPV	90.1	WQVR	100.1	Adrian		Boyer City	
		Federalburg		WVMD	104.7	WVMD	89.3	Concord		Medford		WQTE	95.3	WCLX	93.5
MARYLAND		WCTD	107.1	WVMD	104.7	WVMD	89.3	WIQH	88.3	WMO	91.5			Cadillac	
Annapolis				WVMD	104.7	WVMD	89.3								

WKJF-FM	92.9	WFNN	104.7	Hillsdale		WKLA-FM	106.3	Orchard Lake		Tawas City		Bemidji		East Grand Forks	
WITW	96.7	Farmington Hill		WCSR-FM	92.1	Manistee		WBLD	89.3	WDBI	101.7	KCRB	88.5	KRRK-FM	103.9
Caro		WORB	90.3	Holland		WRRK	97.7	Ostego		WKJC	103.9	KBSB	89.7	Ely	
WKYO-FM	104.9	Flint		WJBL	94.5	Marquette		WAOP	100.9	Three Rivers		KFNW-FM	92.7	WKKQ-FM	96.7
Charlevoix		WDZZ	92.7	WHTC-FM	96.1	WNMU	90.1	Owosso		WLKM-FM	95.9	KBHP	101.1	WSCD	101.7
WKHQ	105.5	WFBE	95.1	Houghton		WHWL	95.7	WOAP-FM	103.9	Traverse City		KKBJ-FM	103.7	WAKX	103.9
Charlotte		WWCK	105.5	WGGL	91.1	WUUN	100.1	Petoskey		WNMC	90.9	Benson		WEVE-FM	105.5
WMMQ	92.7	WGMZ	107.9	WHUH	97.7	WMQT	105.5	WMBN	96.3	WMZK	92.1	KBMO-FM	93.5	Eveleth	
Cheboygan		Frankfort		WGGL	101.7	Marshall		WJML-FM	98.9	WLDL	101.9	Blue Earth		WEVE FM	100.1
WQLZ	105.1	WBNZ	99.3	Houghton Lake		WELL-FM	104.9	WWRM	100.9	WTCM-FM	103.5	KJLY	100.9	Fairmont	
Clare		Fremont		WJGS	98.5	Menominee		Pinnconning		Twin Lake		Brainerd		KFMC	106.5
WCFX	95.3	WSHN-FM	100.1	Howell			106.3	WHLV	100.9	WBLV	90.3	WJJY	106.7	Fairbault	
Coldwater		Gaylord		WHMI-FM	93.5	Midland		Plymouth		Warren		KLIZ-FM	107.5	KDHL-FM	95.9
WNWN	98.5	WEGS	95.3	Interlochen		WRCX	93.5	WSDP	88.1	WPHS	89.1	Breckenridge		Fergus Falls	
Dearborn		WWRM	106.7	WIAA	88.3	WUGN	99.7	Portage		West Branch		KKWB	105.1	KJJK	96.5
WHFR	89.3	Gladwin		Iron Mountain		Monroe			107.7	WBMI	105.5	Buhl		KBRF-FM	103.3
WNIC-FM	100.7	WGMM	103.1	WIMK	93.1	WEJY	89.5	Port Huron		Whitehall		WAKX	95.3	Forest Lake	
Detroit		Grand Haven		WJNR	101.5	WTWR	98.3	WSGR	91.3	WCNF	95.3	Cambridge		WLKX	95.9
WDTR	90.9	WFMG	92.1	WRVM	105.5	Mount Clemens		WORW	91.3	Wyoming		KABG	105.5	Fosston	
WCXI-FM	92.2	Grand Rapids		Iron River		WLBS	102.7	WSAQ	107.1	WYCE	88.1	Chandler		KEHG-FM	107.1
WDRO	93.1	WGNR	88.9	WIKB-FM	99.3	Mount Pleasant		Saginaw		Ypsilanti		KDCR	88.9	Gilbert	
WCZY	95.5	WEHB	89.9	Ironwood		WCMU	89.5	WKCQ	98.1	WEMU	89.1	Chisholm		WAKX	95.9
WHYT	96.3	WCSG	91.3	WIMI	99.7	WMHW	91.5	WIOG	106.3	Zeeland		WAKX	97.7	Glenwood	
WJOI	97.1	WJFM	93.7	WWIB	103.1	WCEN-FM	94.5	WWWS	107.1	WZND	99.3	Cloquet			107.1
WJLB	97.4	WZZR	95.7	WUPM	106.9	Munising		St. Ignace				WKLK-FM	100.9	Golden Valley	
WLLZ	95.7	WLAV	96.9	Ishpeming		WQXO-FM	98.3	WMKC	101.9	MINNESOTA		Collegeville		KORS	92.5
WABX	99.5	WGRD	97.9	WJPD-FM	92.3	Muskegon		St. Johns		Aitkin		KSJU	89.1	Grand Marais	
WRIF	101.1	WCUZ-FM	101.3	WMQT	107.1	WQWQ	104.5	WCXK	92.1	KEZZ	94.3	KSJR	90.1	WAKX	105.5
WDET	101.9	WFUR-FM	102.9	Jackson		WMUS-FM	106.9	WQWQ		Albert Lea		Cook		Grand Rapids	
WMUZ	103.5	WVGR	104.1	WIBM	94.1	Muskegon Heights		WIRX	107.1	KLSE	93.5	WAKX	103.9	KAXE	91.7
WOMC	104.5	WOOD-FM	105.7	WJXQ	106.1	WABM	101.7	Sandusky		KCPI	95.3	Crookston		KNNS	96.9
WORS	105.1	Grayling		Kalamazoo		Newberry		WTGV	97.7	Alexandria		KCMU	91.5	WAVC	101.7
WJZZ	105.9	WQON	100.1	WIDR	89.1	WNBV-FM	93.5	Sault Ste. Marie		KXRA-FM	92.7	KDIE	96.1	WAKX	103.9
WVWW	106.7	Greenville		WKDS	89.9	Niles		WLSX	99.5	KCMT-FM	100.7	KYCK	97.1	Hibbing	
WGRP	107.5	WPLB-FM	107.3	WMUK	102.1	WAOR	95.3	WSUE	101.3	Anoka		Detroit Lakes		WKKQ-FM	93.9
Dowagiac		Hancock		WQLR	106.5	North Muskegon		Scottville		KTWN	107.9	KVLR	95.3	WAKX	103.9
WDOW-FM	92.1	WZRK	93.5	Kalkaska			98.3	WKZC	95.9	Aurora		Duluth		WMFG-FM	106.3
East Lansing		Harrison		WKLt	97.7	Novi		Southfield		WAKX	97.7	WNCB	89.1	Hoyt Lakes	
WKAR-FM	90.5	WKKM	92.1	Lansing		WOVI	89.5	WSHJ	88.3	Austin		KDNW	90.5	WAKX	103.9
WVIC	94.9	Hart		WJIM-FM	97.5	Oak Park		South Haven		KAVT-FM	91.3	WSCD	92.9	Hutchinson	
WFMK	99.1		105.3	WITL-FM	100.7	WOPR	90.3	WCSY	98.3	KLSE	94.3	KQDS	94.9	KDUZ-FM	107.1
Elsie		Hastings		WILS-FM	101.7	Oliver		Spring Arbor		KAUS-FM	99.9	WKKQ-FM	96.7	International Falls	
WOES	91.3	WBCH-FM	100.1	Lapeer		WOCR	89.7	WSAE	89.3	Babbitt		WAKX	98.9	KICC	91.5
Escanaba		Highland Park		WDEY-FM	103.1	Ontonagon		Sturgis		WAKX	101.7	KUMD	103.3	KSDM	94.3
WGLO	97.1	WHPR	88.1	Ludington		WOAS	98.3	WSTR-FM	99.3	WEVE-FM	105.5	WAVC	105.1	KBHW	99.5

Litchfield KLFD-FM 95.3	Owatonna KRPC 90.5	KKKA 104.9	Windom KDOM-FM 94.3	Clinton WHJT 93.5	WHSY-FM 104.5	Mississippi State WMSB 89.1	WABO-FM 105.5
Little Falls WYRQ 92.1	KLSE 98.3	St. Louis Park KDXL 91.7	Winona KQAL 89.5	Coldwater WVIM-FM 95.3	Hazlehurst WMDC-FM 100.9	West Point WKBB 120.9	
Luverne KQAD-FM 101.1	KRFO-FM 104.9	KJJO 104.1	KSMR 90.9	WVIM-FM 95.3	Heidelberg WEEZ 99.3	Winona WKKY 104.9	WONA-FM 96.7
Madison KLQP 92.1	KPRM-FM 97.5	St. Paul KSJN-FM 91.1	KAGE-FM 95.3	WKNZ 101.7	Holly Springs WKRA-FM 92.7	WQNZ 95.1	Yazoo City WJNS 92.1
Mankato KMSU 89.7	Pequot Lakes KTIG 100.1	WMCN 91.7	WWIB 98.3	WFFF-FM 96.7	New Albany WOKM 103.5		
KEEZ 99.1	Peterson KNOF 95.3	KSTP-FM 94.5	Worthington KRSW 91.7	Columbus WMUW 88.5	Houston WCPC-FM 93.3	Newton WOKM 103.5	
KYSM-FM 103.5	Pine City KEEY 102.1	KNOF 95.3	KRWA-FM 95.1	WJWF 103.1	Indianola WNLA-FM 105.5	WMYQ 106.3	MISSOURI
Marshall KKCK 100.1	WCMF-FM 92.1	St. Peter 90.5	MISSISSIPPI	WACR-FM 103.9	Luka WTIB 104.9	Ocean Springs WOSM 103.1	Aurora KELE 100.1
Minneapolis KBEM 88.5	Pipestone KRBI-FM 105.5	KRBI-FM 105.5	Aberdeen WHAY 105.5	Corinth WALP 90.5	Jackson WJSU 88.5	Oxford WMAV-FM 90.3	Ballwin KYM 89.9
KMOJ 89.7	Preston KFIL-FM 103.1	Sartell KTIS-FM 96.7	Albany WA-FM 95.3	WADI 95.3	WOOR 97.5	WMAV-FM 90.3	Bethany KAAN 95.9
KFAI 90.3	Princeton WQPM-FM 106.3	Sauk Centre KMSR 94.3	Baldwyn WESE 95.9	Drew WKZB 95.3	Pascagoula WMPR 90.1	WOOR 97.5	Birch Tree 107.1
WAYL 93.7	Red Lake KFNW-FM 93.5	Sauk Rapids WHMH 101.7	Batesville WBLE 95.9	Ellisville WBSJ 102.3	WMAA-FM 91.3	WGUD 106.3	Bolivar KYOO-FM 106.3
KTCR-FM 97.1	Red Wing KWNG 105.5	Silver Bay WKKQ-FM 96.7	Bay Springs WAXY 93.5	Europa WEXA 101.7	WTYX 94.7	Philadelphi WWSL 102.3	Boonville KDBX 99.3
KTIS-FM 98.5	Redwood Falls KLGR-FM 97.7	WKKQ-FM 96.7	WAXY 93.7	Fayette WJMI 99.7	WLY 96.3	Picayune WJOJ 106.3	Bowling Reen KPCR-FM 100.9
WLQL 99.5	Richfield KDWB-FM 101.3	WAXY 93.7	Booneville WMAE-FM 89.5	Forest WTYJ 97.7	WMSI 102.9	Pontotoc WSEL-FM 96.7	Branson KIRK 106.3
WCTS 100.3	Rochester KFSL 88.5	Thief River Falls KAWS 90.1	Brandon WBIP-FM 99.3	WQST 92.5	Kosciusko WKOZ-FM 105.1	Poplarville WRPM-FM 107.9	Brookfield KQMO 97.7
WCCO-FM 102.9	Montevideo KCCM 91.1	KSNR 99.3	Brookhaven WRJH 97.7	Fulton WFTA 101.7	Laurel WNSL 100.3	Prentiss WJDR 98.3	Buffalo KBFL 90.3
KMGH 105.5	Moorhead KQWB-FM 98.7	Tower-Soudan WAKX 98.9	Brookhaven WMRQ 92.1	Goodman WVTH 89.5	Leland WBAD 102.3	Quitman WYKK 98.3	Butler KMOE 92.1
KVOX-FM 99.9	Morris KLSX 90.7	Two Harbors WKKQ-FM 96.7	Bude WMAU-FM 88.9	Greenville WBAQ 97.9	Lexington WLTD 106.3	Ripley WTXI 102.3	Cabool KVVC 106.3
KUMM 89.7	KKOK 95.7	Virginia WAKX 101.7	Canton WZQX 101.7	Greenwood WMAO-FM 90.9	Louisville WLSM-FM 107.1	Senatobia WJNJ 88.9	California KZMO 94.3
KSJR 99.3	KRCH 101.7	WHLB-FM 107.1	Carthage WZQX 101.7	Grenada WSWG-FM 99.1	Lumberton WLUN 95.3	Starkville WKOR 92.1	Canton KOCA 102.3
New Ulm KXLP 93.1	KROC-FM 103.9	Wabasha KLSE 99.3	Centerville WVYN 98.3	WQXB 100.1	Magee WSJC-FM 107.5	WSMU 106.3	Cape Girardeau KRCU 90.9
Northfield WCAL-FM 89.3	Rushford KLSE 91.7	Wadena KTIG 99.3	WZZB 104.9	Gulfport WGUF-FM 96.7	Mc Comb WCCA 94.1	Tupelo WZLQ 98.5	KRCU 90.9
KRLX 90.3	St. Charles WWIB 92.7	Walker KTIG 92.7	Clarksdale WJBI 101.7	WGCM 102.3	WAKH 105.7	Tylertown WTYL-FM 97.7	KGMO 100.7
Olivia KOLV 101.7	St. Cloud KVSC 88.1	Waseca KQDE 92.1	WVAI 106.3	WZKX 107.1	Meridian WMAW-FM 88.1	Vicksburg WOMV 98.7	KFMP 102.9
Orr WEVE-FM 105.5	St. James KCLD 104.7	Willmar KQIC 102.5	Cleveland WQAZ 92.7	Hattiesburg WMSU 91.1	WJMG 92.1	WOMV 98.7	Carrollton KMZU 101.1
Ortonville KBAA 106.3			WCLD-FM 103.9	WHER 103.7	WJMG 92.1	WOMV 98.7	Carthage KRGK 104.9

Caruthersville KCRV-FM	103.1	Houston KSCM	99.3	Marshfield KOSC-FM	104.9	St. Joseph KSFT	105.1	Waynesville KFBD-FM	97.7	Deer Lodge KOPR	100.1	KYSS-FM	104.9	KCDQ	98.3
Chillicothe KCHI-FM	103.9	Jefferson City KLUM	88.9	Maryville KXCV	90.5	St. Louis KTAD	88.1	KJPW-FM	102.3	Dillon KDLN	98.3	Livingston KYBS	97.5	Wolf Point KYZZ	92.7
Clayton KWUR	90.3	KJMO	100.1	KNIM-FM	99.3	KBDY	89.9	West Plains KWPM-FM	93.9	Drummond KOPR	99.3	KCDQ	99.3		
KFUO-FM	99.1	KTXV	106.9	KMEM	96.7	KWLM	90.7			Ennis KOPR	107.1	KYBS	100.9	NEBRASKA	
Clinton KDKD-FM	95.3	Joplin KSMU	88.3	Mexico KWWR	95.7	KSLH	91.5	MONTANA		KOPR	107.1	Malta KMRR	100.1	Ainsworth KBRB-FM	92.7
Columbia KCOU	88.1	KOBC	90.7	Moberly KSYN	92.5	WIL-FM	92.3	Absarokee KZLS	99.3	Forsyth KXXE	101.3	Marysville KUFM	107.1	Alliance KPNY	92.1
KOPN	89.5	KRFG	99.3	KRES	104.7	DSD-FM	93.7	Anaconda KGLM	97.7	Gallatin-Big Sky KCDQ	98.3	Miles City KMCM	92.7	Auburn KAUB	105.5
KWWC	90.5	KKUZ	102.5	Monett KKBL	95.9	KYKY	98.1	Baker KRCS	100.9	KCDQ	98.3	Missoula KUFM	89.1	Aurora KIAE	103.1
KBIA	91.3	Kansas City KLJC	88.5	Monroe City KLCQ	106.3	KEZK	102.5	Belgrade KCDQ	96.7	KOPR	99.3	KMBI-FM	90.7	Beatrice KMAZ	92.9
KCMQ	96.7	KCUR	89.3	Montgomery City KLSI	93.3	KHTR	103.3	Big Timber KZLS	99.3	KLAN	93.5	KDXT	93.3	Blair KTLX	91.1
KFMZ	98.3	KTSR	90.1	Mountain Grove KXTR	92.7	KMO-FM	95.9	Bilings KRER	88.9	KCGM	103.9	KYSS-FM	94.9	KTTT-FM	93.5
KARO	101.7	KLSI	93.3	Nevada KSTG	97.7	Sedalia KCBW	92.1	KYZZ	101.7	KYZ	107.1	KYOQ	100.1	KOXI	101.1
Crestwood KSHE	94.7	KCEZ	94.9	Osage Beach KYLK	93.5	Sikeston KSTG	97.7	KYYA	93.3	Glendive KIVE	96.5	Opheim KYZZ	101.7	Crete KTAP	103.9
De Soto KOLS	100.1	KMBR	99.7	Overland KRSH	90.1	Springfield KSMU	89.1	KYYA	93.3	Great Falls KLFM	92.9	Philipsburg KOPR	105.5	Crookston KINI	96.1
Dexter KDEX-FM	102.3	KPRS	103.3	Palmyra KTXR	98.7	St. Joseph KRFG	107.1	KZLS	97.1	Hardin KHDN-FM	95.3	Plentywood KATQ-FM	100.1	Fairbury KCIE	99.3
Doniphan KOEK	97.7	KBEQ	104.3	Parkville KGSP	90.3	Steelville KGLT	91.9	KIDX	98.5	Harve KBOZ-FM	93.7	Rattlesnake Valley KUFM	91.5	Falls City KTNC-FM	95.3
Eldon KLDN	92.7	KTMO	98.9	Point Lookout KSOZ	91.7	Stockton KRFG	95.9	KOOK-FM	102.9	Harve KNOG	90.1	Roundup KIDZ	104.9	Fremont KHUB-FM	105.5
El Dorado Springs KESM-FM	105.5	Kirkville KTUF	93.5	Poplar Bluff KPBM	94.5	Sullivan KTUI-FM	100.9	KCAP-FM	106.3	Scobey KPOX	92.5	KZLS	107.1	Gordon KSDZ	95.5
Farmington KTJJ	98.5	Knob Noster KRXL	94.5	Portageville KMIS-FM	106.3	Tarkio KTRX	93.5	KOPR	97.7	KCGM	95.7	KZIN	96.3	Grand Island KROA	95.7
Ferguson KCFV	89.5	Lebanon KLWT-FM	92.1	Rolla KUMR	88.5	Trenton KTTN-FM	92.1	KOUY	95.5	KZIN	96.3	Sidney KGCH	93.1	KRGi-FM	96.5
Florissant KCFM	97.1	Lexington KBK	107.3	St. Charles KCLC	89.1	Union KLPW-FM	101.7	KUFM	99.3	KZIN	96.3	Hastings KQOO	92.7	KSYZ	107.7
Fulton KKCA	97.7	Liberty KWPB	91.9	Ste Genevieve KSGM-FM	105.7	Vandalia KZNN	100.1	KUFM	99.3	KBL-FM	99.5	KIVE	97.7	KCNT	88.1
Gordonville KJAQ	99.3	Malden KMAL	92.7			Warrensburg KCMW	90.9	KCAP-FM	101.1	KCAP-FM	101.1	KALispell	94.3	KEZH	93.5
Greenfield KRFG	93.5	Mansfield KTRI	95.9			Warsaw KAYQ	97.7	KIVE	97.7	KALispell	94.3	KQRR	94.3	Hayes Center KQKY	103.1
Hannibal KGRC	92.9	Marshall KNOS	91.7					KYZZ	101.7	KALS	98.5	KYZZ	101.7	Holdrege KUVF-FM	97.7
Harrisonville KIEE	100.7	KMFL	102.9					Cut Bank	102.7	KFXZ	98.5	Lewistown KLCM	95.9	Kearney KSCV	91.3
										Libby		White Sulphur Springs		KRNY-FM	98.9

KOKY	105.9	Seward		Henderson		KNEV	95.5	Hanover		Bridgeton		Mahwah		Union	
Lexington		KSRD	96.9	KXTZ	94.1	KSRN	104.5	WFRD	99.3	WSNJ-FM	107.7	WRPR	90.3	WKNJ	90.3
KRVN-FM	93.1	Sidney		KILA	95.5	KOZZ	105.7	Henniker		Camden		Manahawkin		Upper Montclair	
Lincoln		KSID-FM	98.7	KMZQ	100.5	KRNO	106.9	WNEC	91.7	WKDN	106.9	WJRZ	100.1	WKNJ	90.3
KZUM	89.5	Superior		Imlay		Rhyolite		Keene		Canton		Millville		Vineland	
KRNU	90.3	KRFS-FM	103.9	KNIX	97.7	KLIA	104.9	WKNH	91.3	WNNN	101.7	WMVB-FM	97.3	WKQV	92.1
KUCV	90.9	Terrytown		KKBC	99.5	Round Hill		WNBX	103.7	Cape May		Morristown		West Long Branch	
KGBI	93.5	KCMJ	103.9	Incline Village	100.1	KHTX	100.9	Laconia		WRIO	102.3	WJSV	90.5	WMCX	88.1
KGHL	95.3	Wayne		KHTX	100.9	Round Mountain		WLNH	98.3	Cherry Hill		Newark		Whippany	
KFMQ	101.9	KWSC	91.9	Indian Springs		KSRN	92.1	Manchester		WBEK	88.1	WBOG	88.3	WHPH	90.5
KFRX	102.7	KTCH FM	104.9	KHTX	104.9	Searchlight		WANH	90.7	WEHS	89.5	WFME	94.7	Wildwood	
KHAT	106.3	York		Las Vegas		KORK-FM	103.9	WZID	95.7	Dover		WVNJ-FM	100.3	WNBR	100.7
KLIN-FM	107.3	KAWL-FM	104.9	KCEP	88.1	KFMS	106.3	WGIR-FM	101.1	WDHA	105.5	WHBI	105.9	Zarephath	
Mc Cook				KNPR	89.5	Sparks		Mt. Washington		East Orange		New Brunswick		WAWZ-FM	99.1
KICX-FM	95.9	NEVADA		KUNV	91.5	KNAA	100.9	WHOM	94.9	WFMU	91.1	WRSU	88.7		
KZMC	105.3	Ash Springs		KOMP	92.3	Stateline		Nashua		Eatontown		WMGQ	98.3		
Nebraska City		KILA	104.9	KUDO	93.1	KHTX	100.9	WOTW-FM	106.3	WHTG-FM	106.3	Newton		NEW MEXICO	
KNCY-FM	97.7	Battle Mountain		KTWB	96.3	Tonopah		Newport		Egg Harbor City		WIXL	103.7	Abiquiu	
Norfolk		KLME	88.1	KORK-FM	97.1	KPAH	92.7	WCNL-FM	101.7	WRDR	104.9	Ocean City		KOB-FM	104.9
KNEN	94.7	KNIS	92.1	KLUC	98.5	KIOQ	101.7	WOKQ	103.1	Flemington		WDVR	98.3	Alamogordo	
KELN	97.1	KSRN	99.3	KFMS	101.9	KILA	103.1	Peterborough		WCVH	90.5	WSLT	106.3	KKEE	94.3
KXNP	103.5	Boulder City		Lovelock		Winnemucca		WMDK	92.1	Franklin		Paterson		KINN-FM	105.5
North Platte		KRRJ	105.5	KSRN	92.1	KSRN	92.1	Plymouth		WSUS	102.3	WPAT-FM	93.1	KLYT	88.3
KODY-FM	94.9	Carlin		KNIS	100.1	KWNA-FM	92.7	WPCR	91.7	Franklin Lakes		Piscataway		KANW	89.1
KELN	97.1	KSRN	95.9	KSFI	103.9	KKBC	93.5	WPNH-FM	100.1	WRRR	88.7	WVPH	90.3	KUNM	90.1
KXNP	103.5	KEZJ	103.1	KSFI		KNIS	95.9	Portsmouth		Glassboro		Pleasantville		KFLQ	91.5
Ogallala		KSFI	105.5	Mc Dermitt				WHEB-FM	100.3	WGLS	89.7	WGRF	99.3	KRST	92.3
KOGA-FM	99.7	Carson City		KJOT	100.1	NEW HAMPSHIRE		Rochester		Hackettstown		Point Pleasant		KOB-FM	93.3
KMCX	106.5	KNIS	94.7	KFXD-FM	106.3	Berlin		WMNH-FM	96.7	WNTI	91.9	WADB	95.9	KWXL	94.1
Omaha		KKBC	97.3	Mc Gill		WXLQ	103.7			Hazlet		Princeton		KHFM	96.3
KVNO	90.7	Elko		KSFI	95.3	Claremont		NEW JERSEY		WVRM	89.3	WPRB	103.3	KZZX	99.5
KIOX	91.5	KLKO	93.5	Mesquite		WECM	106.1	Asbury Park		Highland Park		Princeton Junction		KKJY	100.3
KEZO	92.3	KRJC	95.3	KSFI	96.7	Concord		WJLK-FM	94.3	WVHP	90.3	WWPH	107.9	KBIM-FM	104.9
KYNN-FM	94.1	Ely		North Spring Valley		WEVO	89.1	Atlantic City		Lawrence Township		South Orange		KISZ	105.5
	96.1	KSFI	105.5	KSFI	105.5	WSPS	90.5	WAYV	95.1	WLOR	89.7	WSOU	89.5	KFMG	107.9
KGOR	99.9	Eureka		Orovada		WFKX-FM	102.3	WFPG	96.9	Lawrenceville		Teaneck		Artesia	
KGB	100.7	KSFI	102.1	KJOT	103.1	Conway		WMGM	103.7	WWRC	88.5	WFDU	92.7	KTZA	92.9
KESY	104.5	Fallon		Overton		WMWV	93.5	Avalon		Lincroft		Toms River		Aztec	
O'Neill		KVLV-FM	99.3	KJOT	103.1	Dover		WMOC	94.3	WBJB	90.3	WOBM-FM	92.7	KWYK-FM	94.9
KBRX-FM	102.9	Gerlach		Pahrump		WOKQ	97.5	Blackwood		Linden		Trenton		KRSJ	104.9
Ord		KGLH	91	KILA	103.1	Durham		WDBK	91.5	WVRM	88.9	WTFM	89.1	Bayard	
KNLV-FM	103.9	Hawthorne		Pioche		WUNH	91.3	Blairstown		Long Branch		WTSR	91.3	KLCJ	92.7
Scotsbluff		KKBC	92.1	KILA	104.9	Exeter		WFMV	106.3	WMJY	107.1	WCHR	94.5	Belen	
KMOR	92.9	KNIS	95.9	Reno		WPEA	90.5	Brick Town		Madison		WPST	97.5	KMLW	97.7
KNEB-FM	94.1	KSRN	102.3	KUNR	88.7	WERZ	107.1	WBGD	91.9	WMNJ	88.9	WXW	101.5	Carlsbad	

KATK	92.1	Roswell	WHRW	90.5	WAQX	101.7	WEOS	89.7	WHCU-FM	97.3	WQXR-FM	96.3	Paul Smiths			
Clovis		KBIM-FM	94.9	WQYT	98.1	Clifton Park	WECC	101.7	WPCX	98.3	WYNY	97.1	WPSA	89.1		
KCLV-FM	99.1	KRIZ	97.1	WAAL	99.1		WIAK		WQNY	103.7	WEVD	97.9	Peekskill			
KTQM	99.9	Ruidoso	Brentwood	WXBA	88.1	Clinton	WGFR	92.1	WOKW	107.7	WRKS	98.7	WHUD	100.7		
KICA-FM	107.5	KBVD	93.5				WYLR	95.9	Jamestown		WBAI	99.5	Plainview			
Deming		Santa Fe	Briarcliff Manor			Corinth	Gouverneur		WJWK	91.5	WCBS-FM	101.1	WPOB	88.5		
KDEM	94.3	KNYN	95.5	WZFM	107.1		WIGS-FM	95.3	WWSE	93.3	WPXI-FM	101.9	Plattsburgh			
Espanola		KAFE-FM	97.3	Bristol Center		Corning	WMHR	100.1	WHUG	101.7	WNEW-FM	102.7	WPLT	93.9		
KEVR	102.3		104.1	WYLF	95.1		WCEB	91.9	Johnstown		WNCN	104.3	WGFB	99.9		
Farmington		KNMQ	105.9	Braodablin			WZKZ	106.1	WZRM	104.9	WFRM	105.1	Port Henry			
KNMI	88.9	Taos		WMHR	93.5	Cortland	WGMC	90.1	Kingston		WKHK	106.7	WHRC	92.1		
KRWN	92.9	KVNM	101.7	Brookport			WRCU	90.1	WBPM	94.3	WBLS	107.5	Port Jervis			
KRAZ	96.9	Tucumcari		WBSU	88.9		WOKW	99.9	Lake Placid		Niagara Falls		WDLC-FM	96.7		
Gallup		KQAY	92.7	WBKT	93.3	De Pew	WVIN-FM	98.3	WLPW	105.5	WZIR	98.5	Potsdam			
KQNM	93.7	Zuni		Brooklyn			WBLK	93.7	Hampton Bays		Lake Ronkonkoma		WTSC	91.1		
KOVO	94.5	KSHI	90.9	WKRB	90.9	De Rlyter	WWHB	107.1		WSHR	91.9	WEZG-FM	100.9	WSNN	99.3	
Grants				Brookville			WOIV	105.1	Hempstead		Lake Success					
KYKN	95.3	NEW YORK		WCWP	88.1	Dix Hills	WVHC		88.7	WAPP	103.5	Norwich	WKXZ	93.9	Poughkeepsie	
KOB-FM	97.7	Albany		Buffalo			WHHJ	88.9	Liberty		WVOS-FM	95.9	Nyack	WPKD	101.5	
Hobbs		WAMC	90.3	WBFO	88.7	Dundes	WFLR-FM	95.9	Henrietta		WVOS-FM	95.9	WNYK	88.7	WSPK	104.7
KZOR	94.1	WCDB	90.9	WBNY	91.3				WITR	89.7	Loudonville		Ogdensburg		Remsen	
KPER	95.7	WROW-FM	95.5	WBUF	92.9	Dunkirk	WHUG	105.5	WRHR	90.5	WVCR	88.3	WPAC	92.7	WAES	93.5
La Luz		WMOM	100.9	WNED-FM	94.5				Herkimer		Manlius		Olean		Rensselaer	
KALG	92.7	WHRL	103.1	WJYE	96.1	Ellenville	WDRE	99.3	WYUT	92.7	WAQX	95.3	WEBF	95.7	WQBK-FM	103.9
Las Cruces		WPYX	106.5	WGRO	96.9				Hornell		WBJZ	100.9	WBZJ	100.9	Rhnebeck	
KRWG	90.7	WGNA	107.7	WDCX	99.5	Elmira	WCKR	92.1		92.1	WKGL	92.7	Oneida		WFME	95.3
KASK	103.1	Alfred		WBEN-FM	102.5		WSKG-FM	91.1	WHHO-FM	105.3	Monticello		WMCR-FM	106.3	Riverhead	
KGRT-FM	103.9	WALF	89.7	WPHD	103.3		WLEZ	92.7	Horseheads		WSUL	98.3	Oneonta		WRCN-FM	103.9
Las Vegas		WETD	90.9	WNYS-FM	104.1		WLWV	94.3	WQIX	100.9	Montour Falls		WRHO	89.7	WFME	106.3
KEDP	91.1	Amsterdam		WYRK	106.5		WECW	95.5	Houghton		WNGZ	104.9	WONY	90.9	Rochester	
KLVF	100.9	WMVQ	97.7	Canandaigua		Endicott			WJSL	90.3	Mount Kisco		WMHR	97.7	WRUR	88.5
Los Alamos		Attica		WFLC	102.3		WMRV	105.7	Hudson		WVIP-FM	106.3	WZOZ	103.1	WIRO	90.9
KRSN-FM	98.5			Canton		Frankfort			WRVW	93.5	Newburgh		WSRK	103.9	WXXI-FM	91.5
Lovington		Auburn		WSLU	96.7				Hudson Falls		WFMN	103.1	Ossining		WMJQ	92.5
KLEA-FM	101.7		88.9	Carthage		Fredonia	WCVF	88.9	WENU	101.7	New Rochelle		WOSS	91.1	WCMF	96.5
Mesilla Park		WPCX	106.9						WNIQ	107.1	WRTN	93.5	Oswego		WPXY	97.9
KOPE	104.9	Babylon		Catskill		Fulton			Huntington		New York		WRVO	89.9	WHFM	98.9
Portales		WBAB	102.3				WKFM	104.7	WFME	106.3			WVOR	100.5	WVOR	100.5
KENW-FM	89.5	Baldwinsville		Cazenovia		Garden City			Hyde Park		WNYU	89.1	WGOG-FM	105.5	WEZO	101.3
KNIT	95.3	WBXL	90.5	WITC	90.9		WBAU	90.3	WJJB	97.7	WOCR	90.3	WWWT	101.7	WDKX	103.9
Ramah		WSEN-FM	92.1	Central Square			WHPC	90.3	Ithaca		WFUV	90.7	Patchogue		Rome	
KTDB	89.7	Bath		WCSQ	89.3		WLIR	92.7	WSKG-FM	90.9	WNYE	91.5	WALK-FM	97.5	WKAL-FM	95.9
KTDB	91.3		103.1	Cherry Valley		Geneseo			WICB	91.7	WKTU	92.3	WBLI	106.1	WUUU	102.5
Raton		Binghamton		WJIV	101.9		WGSU	89.3	WVBR	93.5	WNYC-FM	93.9	Patterson		Sag Harbor	
KRTN FM	94.3	WSKG-FM	89.3	Chittenango		Geneva			WHCU-FM	95.5	WPLJ	95.5	WRVH	105.5	WLNQ-FM	92.1

St. Bonaventure		WPNR	90.7	WCCE	90.1	Fairmont		WJZR	99.7	WRSH	91.1	Williamston		KFJM-FM	89.3
WSBU	88.3	WOUR	96.9	Burgaw		WZYX	100.9	Kinston		Rocky Mount		WSEC	103.7	KKXL-FM	92.4
Saratoga Springs		WIBQ	98.7	WVBS	99.9	Farmville		WKNS	90.5	WRSV	92.1	Wilmington		KYTN	94.9
WSPN	91.1	WKGW	104.3	Burlington		WROR	94.3	WRNS	95.1	WFMA	100.7	WHSL	97.3	KFNW-FM	
WASM	102.3	WRCK	107.3	Fayetteville		WBAG		WQDW	97.7	Roxboro		WWOQ	100.9	Heltinger	
Schnectady		Valhalla		WPCM	101.1	WFSS	89.1	Lauringurb		WKRX	96.7	WGNi	102.7	KRCS	
WMHT-FM	89.1	WARY	88.5	Chapen Hill		WQSM	98.1	WSTS	96.5	Sailsbury		Wilson		KSJM	93.3
WRUC	90.9	Walton		WXYC	89.3	Forest City		Lexington		WNDN	102.5	WYYY	106.1	KQDJ-FM	95.5
WGFM	99.5	WDLA-FM	92.1	WUNC	91.5	WBBO-FM	93.3	WLXN	94.1	WRDX	106.5	Windsor		Mandan	
Seneca Falls		Watertown		Charlottesville		Fuquay-Varina		Lumberton		Sanford		WDJB	97.7	KNDR	104.9
WSFW-FM	99.3	WNCQ	97.5	WFAE	90.7	WAKS-FM	103.9	WGSS	95.7	WDCC	90.5	Winston-Salem		Mayville	
Sidney	100.9	WMHR	104.9	WROQ	95.1	Gastonia		WJSK	102.3	WFJA	105.5	WFDD	88.5	KMAV-FM	101.7
Smithtown		Waverly		WSOC-FM	103.7	WZXi	101.9	Mars Hill		Shallotte		WSNC	89.3	Minnot	
WCTO	94.3	WAVR	102.3	WEZC	104.7	Goldsboro		WVMH	90.5	WDZD	93.5	WSEZ	93.1	KIZZ	93.7
Sodus		Webster		WBCY	107.9	WQOR	96.9	Morehead City		Shelby		WTQR	104.1	KCJB-FM	97.1
WSCS	89.5	WMHR	106.3	WOKN	102.3	WMBJ	95.9	WMBJ	95.9	WxiK	96.1	WKZL	107.5	KCJB	
Southampton		West Point		Greensboro		Morganton		WQXX	92.1	Southern Pines		NORTH DAKOTA			
WPBX	91.3	WKDT	89.3	WNAA	90.1	WQXX	92.1	Moyock		WIOZ	107.1	Belcourt		KBTO	
WSBH	95.3	Wethersfield		WQFS	90.9	WQZQ	92.1	WQZQ	92.1	Southport		KEYA	88.5	Valley City	
Southold		WUWU	107.7	WQMG	97.1	Murfresboro		WQZQ	92.1	WLCF	107.1	Bismarck		KOVC-FM	100.9
WBAZ	101.7	White Plains		WROK	98.7	WVDR-FM	98.3	WVDR-FM	98.3	Statesville		KLVD	90.5	Williston	
Staten Island		WFAS-FM	103.9	WLAG	106.1	New Bern		WVDR-FM	98.3	WLTV	96.9	KYYY	92.9	KYYZ	96.1
WSIA	88.9	Woodstock		WVCU	90.5	WTEB	89.5	WVDR-FM	98.3	WFMX	105.7	KQDY	94.5	OHIO	
Stony Brook		WDSO	100.1	WVDR-FM	98.3	WAZZ	101.9	WVDR-FM	98.3	Swan Quarter		WHYC	88.5	Akron	
WUSB	90.1	NORTH CAROLINA				WSFL	106.5	WVDR-FM	98.3	Tabor City		WHYC	88.5	WAUP	88.1
Syosset		Ahoskie		Davidson		WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WAPS	89.1
WKWZ	88.5	WQDK	99.3	WDAV	89.9	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WKDD	96.5
Syracuse		Albermarle		Dunn		WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WAEZ	97.5
WAER	88.3	WABZ-FM	100.9	WIDO	103.1	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	Alliance	
WCNY-FM	91.3	Asaheboro		Durham	88.7	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WRMU	91.1
WNTQ	93.1	WCSE	92.3	WAFR	90.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WDJQ	92.5
WSYR-FM	94.5	WDCG	105.1	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	Archbold	
WMHR	102.9	WDBS	107.1	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WPOS	92.1
WRRB	107.9	WUNF-FM	88.1	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WHFD	96.4
Terryville		WBUM	91.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	Ashland	
WFME	105.5	WLOS	99.9	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WRDL	88.9
Ticonderoga		Behhaven		WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WNCO-FM	101.3
WXTY	103.9	WKJA	92.1	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	Ashtabula	
Troy		Black Mountain		WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WREO	97.1
WRPI	91.5	WMIT	106.9	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	Athens	
WFLY	92.3	Boiling Springs		WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WOUB-FM	91.3
Tupper Lake		WGWW	88.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WXTQ	105.5
WTPL	102.3	Boone		WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	Bainbridge	
Utica		WASU	90.5	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WKHR	88.3
		Buies Creek		WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	WVDR-FM	98.3	Batavia	

WCNE	88.7	WVXU	91.7	WHIO-FM	99.1	WBLZ	103.5	WCVO	99.3	WRCJ	89.3	Wellston		KKAJ	95.7
WOBO	88.7	WWEZ	92.5	WTUE	104.7	Hillsboro		WMRN-FM	106.9	Salem		WKOV-FM	96.7	Bartlesville	
WURD	99.3	WAKW	93.3	WDAO	107.7	WSRW-FM	106.7	Medina		WQXK	105.1	West Carrollton		KYFM	100.1
Bellaire		WSAI-FM	94.1	De Graff		Holland		WDBN	94.9	Shelby		WQRP	88.1	Bethany	
WBHR	88.7	WRRM	98.5	WDEQ	103.3	WPOS	102.3	Miamisburg		WSWR	100.1	West Chester		KJIL	104.9
WOMP-FM	100.5	WKRQ	101.9	Delaware		Ironton		WRSF	89.9	Sidney		WLHS	89.9	Bristow	
Bellefontaine		WEBN	102.7	WSLN	91.1	WEMM	95.3	WFCJ	93.7	WMVR-FM	105.5	Westerville		KREK	104.9
WTOO	98.3	WUBE	105.1	Delphos		WITO	107.1	Middleport		WWSO		WBBY	103.9	Broken Arrow	
Bellevue		Circleville		WDOH	107.1	Jackson		WMPO-FM	92.1	WUSO	89.1	WOBN	105.7		90.5
WNR	92.1	WNRE-FM	107.1	Dover-New Philadelphia		WCJO	97.7	Middletown		WEEC	100.7	West Union		KMYO	92.1
Be pre		Cleveland		WJER-FM	101.7	Jefferson		WPBF	105.9	WAZU	102.9	WRAC	103.1	Chickasha	
WNUS	107.1	WCSB	89.3	East Liverpool		WCJV	90.9	Milford		Steubenville		Wilberforce		KXXX	105.5
Berea			90.3	WELA	104.3	Johnstown		WLYK	107.1	WRKY	103.5	WCSU	88.9	Claremore	
WBWC	88.3	WRUW	91.1	Eaton		WWWJ	103.1	Morrow		Streetsboro		Wilmington		KNGX	91.3
Berlin		WZAC	93.1	WJAI	92.9	Kent		WLMH	88.1	WSTB	91.5	WSWO	102.3	Clinton	
WCRF	88.3	WCLV	95.5	Elyria		WKSU	89.7	Mount Vernon		Struthers		Wooster		KCLI	95.3
Bowling Green		WGCL	98.5	WBEA	107.3	WNIR	100.1	WMVO-FM	93.7	WKTU	90.7	WCWS	91.9	KKCC-FM	106.9
WBGU	88.1	WKSW	99.5	Fairborn		Kenton		Napoleon		Sylvania		WWST-FM	104.5	Comanche	
WKIQ	93.5	WMMS	100.7	Fairfield		WKTU	95.3	Newark		WWWM	105.5	Xenia		KHME	96.7
Bryan		WDOK	102.1	Kettering		WKET	89.5	WGLT-FM	100.3	WHEI	88.9	WBZI	95.3	Duncan	
WBNO-FM	100.9	WCRF	103.3	WLLT	94.9	WVUD	99.9	WNKO	101.7	WTTT-FM	103.7	WDJX	103.9	KRHD-FM	102.3
Bucyrus		WQAL	104.1	Findlay		Lancaster		New Concord		Toledo		Yellow Springs		Durant	
WBCQ	92.7	WMJI	105.7	WLFC	88.3	WHOK	95.5	WMCO	90.7	WAMP	88.3	WYSO	91.3	KHIB	91.9
Cambridge		WZZP	106.5	WHMQ	100.5	Lima		New Lexington		WGTE-FM	91.3	Youngstown		KSEO-FM	107.1
WILE-FM	96.7	WDMT	107.9	Fostoria		WGLE	90.7	WWJM	106.3	WMHE	92.5	Edmond		Edmond	
Canton		Cleveland Heights		Fremont		WTGN	97.7	New Philadelphia		WKLR	99.9	WQOD	93.3	KCSX	90.1
WHBC-FM	94.1	WRQC	92.3	WFRQ-FM	99.1	WIMT	102.1	WNPO	95.9	WLQR	101.5	WKBN-FM	98.9	KCKF	90.9
WTOF	98.1	Clyde		WPOS	107.1	WLSR	104.9	Norwalk		WIOT	104.7	WSRD	101.1	KKLR	97.7
WOOS	106.9	WMEX	100.9	Gahanna		Logan		WLKR-FM	95.3	University Heights		Zanesville		Elk City	
Castalia		Columbus		WCVO	104.9	London		WLGK-FM	98.3	WUJC	88.7	WCVZ	92.7	KECO	96.5
WGGN	97.7	WOSU-FM	89.7	Galion		Lorain		WBOC	91.5	Upper Sandusky		WHIZ-FM	102.5	Enid	
Cedarville		WCBE	90.5	WQXG	102.3	WPNM	106.3	Ottawa		WYAN	95.9			KNID	96.9
WCDR	90.3	WSNY	94.7	Gambier		Oxford		WPNM	106.3	Urban		OKLAHOMA		KUAL	103.1
Celina		WLVO	96.3	Georgetown		Mansfield		WUHS	91.7	Ada		KTEN FM	93.3	KCES	102.3
WKKI	94.3	WNCI	97.9	Granville		WMC	90.7	WCOM	101.7	Altus		KASX	96.7	Frederick	
WCSM-FM	96.7	WRMZ	99.7	Greenville		WCLW-FM	105.3	WXPY	97.7	Van Wert		KWHW-FM	93.5	KYBE	95.3
Centerville		Conneaut		WVUD	90.9	WVNO	106.1	Piquet		WERT-FM	98.9	Wapakoneta		Goodwell	
WCWT	92.1	WGQJ	105.5	WVNO	106.1	Port Clinton		WPTW-FM	95.7	WAXC	92.1	Alva		KPSU	91.7
Chillicothe		Coshocton		WVNO	106.1	Portsmouth		WPTW-FM	95.7	WAXC	92.1	KXLS	99.7	Grove	
WKKJ	93.3	WTNS-FM	99.3	WVNO	106.1	WMOA-FM	94.3	WPTW-FM	95.7	WAXC	92.1	Washington Court		KGVE	99.3
WFCB	94.3	Dayton		WVNO	106.1	WMOA-FM	94.3	WPTW-FM	95.7	WAXC	92.1	House		Guymon	
Cincinnati		WCLX	89.3	WVNO	106.1	WMOA-FM	94.3	WPTW-FM	95.7	WAXC	92.1	WCHO-FM	105.5	KANZ	99.3
WAIF	88.3	WDPS	89.3	WVNO	106.1	WMOA-FM	94.3	WPTW-FM	95.7	WAXC	92.1	WCHO-FM	105.5	Henryetta	
WJVS	88.3	WGXM	97.3	WVNO	106.1	WMOA-FM	94.3	WPTW-FM	95.7	WAXC	92.1	WCHO-FM	105.5	KGCG	99.5
WGUC	90.9			WVNO	106.1	WMOA-FM	94.3	WPTW-FM	95.7	WAXC	92.1	WCHO-FM	105.5		

Hobart		KINB	107.3	KCMX-FM	101.9	KLCC	91.5	KTMT	100.9	KGON	92.3	Wallowa Valley	WLSP	94.3	
KQTZ	105.9	Pryor		KTMT	103.1	Creswell		KVIP-FM	103.5	KPDQ-FM	93.7	KPBX	89.5	Carlisle	
Hugo		KMYZ-FM	104.5	Astoria		KRNN	95.3	La Grande		KXL-FM	95.5	KKPL	100.9	WDCV	88.3
KITX	95.3	Salinas		KMUN	91.9	Dead Indian		KEOL	91.7	KCNR-FM	97.1	KXLY-FM	107.1	WHYL-FM	102.3
Idabel		KAZZ	95.9	KBKN	92.9	KSOR	99.5	KLBM-FM	98.3	KUPL-FM	98.5	Warm Springs		Central City	
KWDG	96.7	Sapupa		KPDQ-FM	96.7	Eagle Point		Lake Oswego		KJIB	99.5		96.5	WWZE	101.7
Langston		KXOJ-FM	100.9	Baker		KEPO	92.1	KMJK	106.7	KQFM	100.3	West Central Point		Chambersburg	
KALU	90.7	Seminole		KBKR-FM	95.3	Eugene		Lakeview		KRCK	101.1	KFMJ	98.3	WIKZ	95.1
Lawton		KSLE	105.5	Bandon		KLCC	89.7	KSOR	90.1	KINK	101.9			Charleroi	
KMBZ	95.3	Stillwater		KSOR	88.3	KWAX	91.1	Langlois		KRRC	107.5			WESA-FM	98.3
KRLG	98.1	KOSU	91.7	Beaverton		KRVN	91.9	KSOR	91.3	Port Orford				Chester	
KLAW	101.5	KSPI-FM	93.9	KTJA	103.3	KBMC	94.5	Lebanon		KSOR	89.3	WMUH	91.7	WDNR	89.5
Mc Alester		KVRO	105.5	Bend		KZEL	96.1	KIQY	103.7	KURY-FM	106.3	WFMZ	100.7	Clarion	
KMCO	101.3	Sulphur		KXIQ	94.1	KUGN-FM	97.9	Lincoln City		Prinneville		WKKW	104.1	WCUC	91.7
Miami		KSDW	100.9	KPDQ-FM	96.7	KPNW-FM	99.1	KCRF	96.7	KIJK	95.3			Clearfield	
KSSM	100.9	Tahlequah		KICE	100.7	Florence		Mc Minnville		KXIQ	102.3	Altoona		WQYX	93.5
Muskogee		KISR	92.1	KIJK	105.5	KLCC	92.7	KSCL	90.3	KPDQ-FM	103.9	WFBG-FM	98.1	Cresson	
KAYI	106.9	KEOK	101.7	Brookings		KMTB	104.7	Medford		Redmond		WPRR	100.1	WBXQ	94.3
Norman		Tonkawa		KURY-FM	95.3	Gold Beach		KTMT	93.7	KPDQ-FM	97.7	WDBA	102.3	Danville	
KGOU	106.3	KAYE	90.7	Camas Valley		KSOR	91.9	KBOY-FM	95.3	KPRB-FM	102.9	Beaver Fall		WPGM-FM	96.7
Nowata		Tulsa		KSOR	88.7	KGBR	92.7	KVIP-FM	106.3	Fiddle		WGEV		Du Bois	
KNFB	94.3	KWGS	89.5	Canyonville		KTMT	107.1	KEAR	107.1	KSOR	91.3	Bedford		WOWQ	102.1
Oklahoma City		KBEZ	92.9	KSOR	91.9	Gold Hill		Myrtle Creek		KRSB	103.9	WRAX	100.9	WDBA	107.3
KOCC	88.5	KWEN	95.5	Cave Junction		KRWO	100.3	KSOR	89.3	Roseburg		Bellwood		Easton	
KKNG	92.5	KRAV	96.5	KSOR	91.9	Grants Pass		Myrtle Point		KSOR	90.1	KSOR	103.9	WJRH	90.5
KEBC	94.7	KMOD	97.5	KEAR	103.9	KSOR	91.3	KSOR	88.9	KRSB	103.1	WHGM		WLEV	96.1
KXXY	96.1	KCFO	98.5	Central Point		KFMJ	96.9	Newport		Salem		Bethlehem		WQQQ	99.9
KLNK	98.9	KTFX	103.3	KCHK	91.7	KEAR	101.7	KLOO-FM	100.9	KSKD	105.1	WLVN	91.3	East Stroudsburg	
KATT FM	100.5	Vinita		Chemult		KTMT	103.1	KNPT-FM	102.5	WZZO		Blairsville		WESS	90.3
KLTE	101.9	KITO	95.9	KSOR	91.9	KRWO	105.5	North Bend		KPDQ-FM	97.7	WCOO	106.3	Ebensburg	
KJYO	102.7	Weatherford		KTMT	103.1	Gresham		KOOS	100.9	Springfield		Blomsburg		WIYQ	99.1
KOFM	104.1	KWEY-FM	97.3	Chiloquin		KMHD	88.5	Oakridge		KSND	93.1	WHLM-FM	106.5	Edinboro	
KKLR	107.1	Woodward		KSOR	91.3	Hermiston		KLCC	91.5	Sutherlin		Boyertown		WFSE	88.9
KAEZ	107.7	KDAA	92.1	Coos Bay		KOHU-FM	99.3	Ontario		KSOR	89.3	WBVO	107.5	Elwood City	
Okmuigee		KSIW-FM	93.5	KSOR	90.1	Good River		KXQB	96.1	KRSB	103.9	Braddock		WFEM	92.1
KOKL-FM	94.3		101.1	KICR	98.3	KCGB	105.5	Pendleton		Sweet Home		WHYW-FM	96.9	Ephrata	
Owato		OREGON		KYNG-FM	105.5	Jacksonville		KRBM	90.9	KNTL	107.1	Brookville		WIOV	105.1
KCMA	106.1	Albany		Coquille		KSOR	88.1	KFMT	103.5	The Dalles		WMKX	95.9	Erie	
Pauls Valley		KRKT-FM	99.9	KSOR	88.3	KRWQ	105.5	KUMA-FM	107.7	KCIV	104.5	Butler		WERG	89.9
KGOK	97.7	KHPE	107.9	KSRR-FM	102.3	Klamath Falls		Pinehurst		Tillamook		WLER	97.7	WQLN-FM	91.3
Ponca City		Alsea		Corvallis		KSOR	88.7	KSOR	91.9	KTIL-FM	104.1	California		WCTL	89.3
KLOR	99.3	KLOO-FM	100.9	KBVR	88.7	KTEC	89.5	Portland		Toledo		WVCS	91.9	WLVU	99.9
KPNC	100.9	Ashland		KEJO	101.5	KJSN	92.5	KBPS-FM	89.9	KCEL	107.1	Canton		WOCK	103.7
Poteau		KSOR	90.1	KLOO-FM	106.1		95.9	KBOO	90.7	Union		WKAD	102.3	Exeter	
KLUP	97.9	KVIP-FM	92.1	Cottage Grove		KAGO-FM	99.5	KOAP-FM	91.5	KUUZ	95.9	Carbondale		WASD	88.1

Folsom		Jenkintown		WKSZ	100.3	WMGK	102.9	WQSU	88.9	Warminster		WJMF	88.7	WDPN	103.1
WRSD	94.9	WBIF-FM	103.9	Mercer		WSNI	104.5	Shamokin		WCSD	89.3	Westerly		WNOK	104.7
Franklin		Jersey Shore		WWIZ	103.9	WDAS-FM	105.3	WSPI	95.3	Warren		WERI-FM	103.7	Conway	
WVEN	99.3	WSOV	97.7	Mercersburg		WWSH	106.1	Sharon		WRRN	92.3	Woonsocket		WLAT-FM	104.1
Freeland		Johnstown		WRCV	92.1	Pittsburgh		WYFM	102.9	Washington		WWON-FM	106.3	Darlington	
WQEQ	103.1	WGLU	92.1	Middletown		WRCT	88.3	Sharpsville		WJCR	92.1			WDAR	105.5
Gettysburg		WJAC-FM	95.5	WMSS	91.1	WOED-FM	89.3	WMGZ-FM	95.9	WYTK	95.3	SOUTH CAROLINA			
WZBT	91.1	WJNL-FM	96.5	Mifflinburg		WDOU	90.5	Shippensburg		Waynesboro		Aiken		WDSC-FM	92.9
WGTY	107.7	Kane		WWMC	98.3	WYEP	91.3	WSYC	88.7	WAYZ-FM	101.5	WPBM-FM	95.9	Easley	
Girard		WRXZ	103.9	Millersville		WPNT	92.9	Slippery Rock		Waynesburg		WNEZ	99.3	WELP-FM	103.9
WGAE	88.3	Kearsarge		WIXQ	91.7	WBZZ	98.7	WSRU	90.1	WCYJ	88.7	Allendale	93.5	Florence	
Greencastle		WSEG	92.7	Milton		WWSW	94.5	Somerset		WANB-FM	103.1	Anderson		WSTN	106.3
WKSL	94.3	Lancaster		WOEZ	100.9	WKKX	96.1	WVSC-FM	97.7	Wellsboro		WCKN	101.1	Gaffney	
Greensburg		WFNM	89.1	Montrose		WSHH	99.7	South Williamsport		WRKC	88.5	WANS-FM	107.3	WYFG	91.1
WOKU	107.1	WPTG	90.3	WPEL-FM	96.5	WPIT-FM	101.5	WMPT-FM	99.3	WCHL	90.7	Bamberg		WAGI	105.3
Greenville		WDAC	94.5	Mt Pocono		WDOE	102.5	WRHY	92.7	WYZZ	92.9	WWBD-FM	92.7	Georgetown	
WTGP	88.1	WLAN-FM	96.9	WGBI-FM	92.1	WYDD	104.7	Starview		WKRZ-FM	98.5	Barnwell		WGBB	97.7
WGRP FM	107.1	WNCE	101.3	Nanticoke		WAMO-FM	105.9	WTLR	89.9	Williamsport		WBAW-FM	101.7	WAZX	106.3
Grove City		Lebanon		WMJW	92.1	WDSY	107.9	State College		WWAS	88.1	Beaufort		Goose Creek	
WSAJ-FM	89.5	WKDN	97.7	New Kensington				WTLR	89.9	WRLC	91.7	WJWJ-FM	89.9	WBXJ	94.3
WEDA	95.1	WUUF	100.1	WNUF	100.7			WDFM	91.1	WKSJ	102.7	WQLO	98.7	Greenville	
Hanover		Lehman		New Wilmington		Pottsville		WCLR	103.1	WPGM-FM	103.9	Camden		WLFJ	89.3
WRBS	107.1	WPSU	89.1	WNNW	88.9	WAVT	101.9	Stroudsburg		WILQ	105.1	WPUB	94.3	WEPR	90.1
Harrisburg		Lewisburg		North East		Punxsutawney		WVPO-FM	93.5	York		Cayce		WESC-FM	92.5
WMSP	94.9	WVBU	90.5	WHYP-FM	100.9	WPXZ-FM	105.5	WQKX	94.1	WVYC	88.1	WZLD	96.7	WFBC-FM	93.7
WHP-FM	97.3	Lewistown		Oil City		Reading		Sunbury		WYCR	98.5	Charleston		WMMU-FM	94.5
WSFM	99.3	WMRF-FM	95.9	WRJS	98.5	WXAC	91.3	WQKX	94.1	WSBA-FM	103.3	WMMK	88.1	WPLS	96.5
WTPA-FM	104.1	Lincoln University		Palmyra		WRFY	102.5	Swarthmore		WQXA	105.7	WSCI	89.3	Greenwood	
Havertown		WLIU	88.7	WCTX	92.1	Red Lion		WSRN	91.5	RHODE ISLAND				WSCZ	96.7
WHHS	89.3	Linesville		Philadelphia		WGCB-FM	96.1	Tamaqua		Conventry		WSSX	95.1	Hampton	
Hazleton		WVCC	101.7	WPEB	88.1	Ridgway		WZTA	105.5	WCVY	91.5	WXTC	96.9	WJBW	103.1
WLZN	97.9	Lock Haven		WXPB	88.9	WKBI-FM	94.3	Telford		Kingston		WKTM	102.5	Hemingway	
Hershe		WBPZ-FM	92.1	WRTI	90.1	Saegertown		WBMR	91.7	WRIU	90.3	WEZL	103.5	Hilton Head Island	90.9
WTF-FM	89.5	Mansfield		WHYY	90.9	WYSS	94.3	Towanda		Middletown		Cherwar		WHHR	106.3
WRKZ	106.7	WNTE	89.5	WKDU	91.7	Schnecksville		WTTT-FM	95.3	WOTB	107.1	WPDZ	103.1	Honea Path	
Holidaysbutg		Martinsburg		WPWT	91.7			Tyrone		Portsmouth		Chester		WRXJ	103.1
WHPA	104.9	WJSM-FM	92.7	WIFI	92.5	Scottdale		WGMR	101.1	WJHD	*90.7	WZDK	99.3	Kingstree	
Honesdale		Mc Kean		WMMR	93.3	WLSW	103.9	Union City		Providence		WBSF	88.1	WWTG	98.3
WDNH-FM	95.3	WSEG	102.3	WYSP	94.1	Scranton		WCTL	106.3	WDOM	91.3	Colombia		Ladson	
Huntigdon		Meadville		WFLN FM	95.7	WVIA FM	89.9	Union City		WLPRO-FM	92.3	WMHK	89.7	WKCL	91.5
WKVR	103.5	WARC	90.3	WDOB	96.5	WVMW	91.5	WCTL	106.3	WHJY	94.1	WUSC	90.5	Lake City	
WRLR	106.3	WZPR	100.3	WCAJ FM	98.1	WGBI FM	101.3	Uniontown		WBRU	95.5	WLTR	91.3	WGFG	100.1
Indiana		Mechanicsburg		WUSL	98.9	WDDL	104.9	WPQR	99.3	WPJB	101.5	WXRY	93.5	Lancaster	
WIUP	90.1	WKCD	93.5	WEAZ	101.1	WEZX	107.1	University Park		Smithfield		WCOS-FM	97.9	WPAJ	107.1
WQMU	103.1	Media		WIOQ	102.1	Selinsgrove		WQWK	96.7						

Laurens		KQAA	94.9	Philip		TENNESSEE		WASL	100.1	WTFM	98.5	WZXR	102.7	WCSO	91.5
WSSL	100.5	Bison		KGGG	95.3	Athens		Elizabethton		WZXY	104.9	WRVR	104.5	Smithville	
Manning		KRCS	97.7	KRCS	97.7	WJSQ	101.7	Knoxville	88.3	WMBW		WEZI	105.9	WJLE-FM	101.7
WTWE	92.1	Brookings		Pierre		Bolivar		WIDD-FM	99.3	WUTK	90.3	Milan		Soddy-Daisy	
Marion		KESD	88.3	KGFX-FM	92.7	WVST	96.7	Erwin		WKCS	91.1	WKBK-FM	92.3	WCHU-FM	102.3
WATP-FM	94.3	KGKG	94.3	KNEY	95.3	Bristol		WXIS	103.9	WUOT	91.9	Morristown		Sparta	
Moncks Corner		Custer		KRCS	97.7	WHCB	91.5	Etowah		WEZK	97.5	WAZI	95.9	WSMT-FM	105.5
WLWW	105.5	KRCS	103.9	Pine Ridge		WXBQ	96.9	WMCC	103.1	WIMZ-FM	103.5	Murfreesboro		Springfield	
Mullins		Deadwood		KINI	105.5	Brownsville		Fayetteville		WIVK-FM	107.7	WMOT	89.5	WDBL-FM	94.3
WCIG	107.1	KSQY	95.1	Platte		WTBG	95.3	WYTM	105.5	La Follette		WKOS	96.3	Summertown	
Myrtle Beach		KRCS	97.7	KDCR	90.7	Camden		Franklin		WOLA	104.9	Nashville		WUTZ	88.3
WJYR	92.1	Dupree		Porcupine		WRJB	98.3	WJKZ	100.1	Lawrenceburg		WRFN	88.1	Sweetwater	
WKZQ	101.7	KRCS	97.7	KILI	90.1	Carthage		Gallatin		WDXE-FM	95.9	WNAZ	89.1	WDEH-FM	95.2
North Myrtle Beach		Eagle Butte		Rapid City		WRKM-FM	102.3	WVCP	88.5	Lebanon		WPLN	90.3	Trenton	
WNMB	105.5	KRCS	97.7	KTEO	91.3	Centerville		WWKX	104.5	WLCH	88.7	WRVU	91.1	WTNE-FM	97.7
Orangeburg		Edgemont		KKHJ	93.9	WHLF-FM	96.7	Gatlingburg		WFMO	91.3	WZEE	92.9	Tulahoma	
WIMC	90.3	KGGG	92.1	KVSR	97.9	Chattanooga		WYHY	105.5	WYHY	107.3	WSM-FM	95.5	WBGY-FM	93.2
WFCM	91.9	KRCS	97.7	KGGG	100.3	WUTC	88.1	Germantown		Lenoir City		WSIX-FM	97.9	Union City	
WORG-FM	103.9	Freeman		KRCS	103.9	WMBW	88.9	WLVS	94.3	WLIL-FM	93.5	WKDF	103.3	WALR-FM	104.9
WIGL	106.7	KDCR	90.7	Sioux Falls		WDYN	89.7	Greeneville		Lewisburg		WJYN	105.9	Waverly	
Pageland		Garden City		KAUR	89.1	WDEF-FM	92.3	WMBW	91.5	WJWM-FM	94.3	Oak Ridge		WVRY	104.9
WOPL-FM	102.3		89.3	KCFS	90.1	WDOD-FM	96.5	WIKQ	94.9	Lexington		WETQ	94.3		
Rock Hill		Gregory		KELO FM	92.5	WSKZ	106.5	Harriman		WZLT	99.3	WOKI	100.3	TEXAS	
WNSC-FM	88.9	KKSD	101.5	KKRC	93.5	Cleveland		WKJS	92.7	Livingston		Olivehill		Abilene	
St. George		Hill City		KNWC-FM	96.5	WQNE	95.3	Henderson		WXXG	95.9	WONX	89.1	KGNZ	88.1
WKQB	107.5	KRCS	103.9	KPAT	97.3	WQLS	100.7	WFHC	91.5	Lobelville		Oneida		KORQ	130.7
Seneca		Hot Springs		KIOV	104.7	Clinton		Hendersonville		WPCT	94.3	WBNT-FM	105.5	KEAN-FM	105.1
WBFM	98.1	KGGG	95.3	Spearfish		WNKX	95.3	WMAK	92.1	Manchester		Paris		KFMN-FM	107.9
Spartanburg		KOBH-FM	96.7	KBHU	89.1	Collegedale		Humboldt		WMSR-FM	99.7	WTPR-FM	105.5	Alamo	
WSPA-FM	98.9	KRCS	103.9	KRCS	97.7	WSMC	90.5	WZDQ	102.3	Martin		Pikeville		KJAV	104.9
Summerville		Huron		Springfield		Columbia		Huntingdon		WUTM	90.3	WIKU	91.3	Alice	
WWWZ	93.5	KURO	92.1	KSTI	90.1	WKOM	101.7	WPBE	100.9	WCMT-FM	101.7	Pulaski		KDSI	92.1
Sumter		Kadoka		Sturgis		Cookeville		Jackson		Mc Kenzie		WMGL	98.3	KBIC	102.3
WRJA-FM	88.1	KGGG	95.3	WTTU	93.1	WTTU	88.5	WJHR	101.3	WKTA	106.9	Red Bank		Alvin	
WWDM	101.3	KRCS	103.9	WGSQ	94.3	WGSQ	94.3	WKIR	104.1	Mc Minnville		WJTT	94.3	KACC	91.3
Surfside Beach		Lemmon		KUSD-FM	89.7	WHUB-FM	98.3	Jamestown		WBMC-FM	103.9	Savannah		Amarillo	
WYAK-FM	103.1	KRCS	97.7	KVRF	102.3	Covington		WDEB-FM	103.9	Memphis		WKWX	93.5	KACV	89.9
Walterboro		Madison		Watertown		WKBL-FM	93.5	Jefferson City		WQOX	88.5	WORM-FM	101.7	KOIZ-FM	93.1
WALD-FM	100.9	KJAM-FM	103.1	KIXX	96.1	Crossville		WSBM	99.3	WLYX	89.3	Sevierville		KBUY	94.1
West Columbia		Milbank		WXXL	99.3	Dayton		Johnson City		WEVL	89.9	WMYU	102.9		96.9
WSCQ	100.1		104.3	WYR-FM	93.7	WYR-FM		WETS	89.5	WKNO-FM	91.1	Sewanee		KGNC-FM	97.9
		Mitchell		Yankton		WNFM	104.9	WQUT	101.5	WSMS	91.7	WUTS	91.3	KYTX	98.7
SOUTH DAKOTA		KMIT	105.9	KKYA	93.1	Dickson		Kingsport		WHRK	97.1	Shelbyville		KWAS	101.9
Aberdeen		Mobridge		KQHU	104.1	WTNQ	102.3	WCSK	90.3	WMC-FM	99.7	WYCO	102.9	Amdrews	
KSDN-FM	94.1	KOLY-FM	99.5	Dyersburg				WMBW	91.3	KRNB	101.1	Signal Mountain		KACT-FM	105.5

Arlington		Brownfield	103.9	KZFM	95.5	KOIR	88.5	KKXX	106.5	Iraan		KFMX	94.5	Nacogdoches	
KWJS	94.9	Brownsville		KIOU	96.5	KBFM	104.1	Gatesville		KRCT	105.5	KLLL	96.3	KSAU	90.1
Atlanta		KBNR	88.3	KBCB	99.1	KVLY	107.9	KPEP	98.3	Jacksonville		KRLB-FM	99.5	KTBC	92.1
KPYN	99.3	KRIX	99.5	Corsicana		El Campo		Georgetown		KOOI	106.5	KTEZ	101.1	KJCS	103.3
Austin		KDUV	100.3	KXCL	107.9	KXGC	96.9	KGTN-FM	96.7	Jasper		KRUX	102.5	New Braunfels	
KAZI	88.7	KDUV	103.9	Crockett		Eldorado		Gilmer		KWYX	102.3	Lufkin		KNBT	92.1
KMFA	89.5	Brownwood		KIVY-FM	92.7	KRCT	102.3	KNIF	95.3	Junction		KDEY	99.3	Odessa	
KUT	90.5	KPSM	99.3	KCKR	93.5	El Paso		Graham		KVRN-FM	102.3	KYKS	105.1	KOCV	91.3
KLBJ-FM	93.7	KOXE	101.5	Dalhart		KTEP	88.5	KWKQ	107.1	Keene		Malakoff		KQIP	96.9
KOKE-FM	95.5	KXYL-FM	104.1	KXIT-FM	95.9	KFIM	92.3	Greenville		KSUC	88.3			KUFO	97.9
KHFI	98.3	Bryan		Dallas		KAMZ	93.1	KIKT	93.5	Kenedy		Marlin		KKKK	99.1
KASE	100.7	KORA	98.3	KRSM	88.5	KEZB	93.9	Harlingen		KTNR	92.1	KLMT	96.7	Orange	
KPEZ	102.3		104.9	KCBI	89.3	KSET-FM	94.7	KELT	94.5	Kerrville		Marshall		KZOM	104.5
Balinger		Burnet		KERA-FM	90.1	KLAQ	95.5	KIWW	96.1	KERV-FM	94.3	KBWC	91.1	KIOC	106.1
KRUN-FM	103.1	KMRB	107.1	KNON	90.9	KHEY-FM	96.3	Haskell		Kilgore		KMHT-FM	103.9	Ozona	
Bandera		Cameron		KVTT	91.7	KYSR	97.5	KVRP	95.5	KKTX	95.9	Mc Allen		KRCT	94.3
KQRK	98.3	KCFM	103.1	KAFM	92.5	KTSM-FM	99.9	Henderson		Killeen		KVMV	96.9	Palestine	
Beaumont		Canyon		KZEW	97.9	KLOZ	102.1	KGRI-FM	100.1	KNCT-FM	91.3	KQXX	98.5	KLIS	96.7
KVLU	91.3	KWTS	91.1	KLVU	98.7	Fabens		Hereford		KIXS	93.3	Mc Kinney		KYYK	98.3
KQXY	94.1	KHBQ	107.1	KMEZ-FM	100.3	KPAS	103.1	KPAN-FM	106.3	Kingsville		KMMK	95.3	Pampa	
KZZB	95.1	Carthage	98.9	WRR	101.1	Falfurrias		Hillsboro		KTAI	91.1	Memphis		KOMX	100.3
KAYD	97.5	Center		KMGC	102.9	KPSO-FM	106.3	KHBR-FM	102.5	KODK	92.7	KLRS-FM	105.5	Paris	
KWIC	107.7	KLCR	102.3	KVIL-FM	103.7	Farwell		Hooks		KINE-FM	97.7	Menard		KTXU	99.3
Beeville		Clear Lake City		KKDA-FM	104.5	KIJN	92.3		95.9	La Grange		KVRNFM	102.3	Pasadena	
KCWW	104.9	KMJQ	102.1	KOAX	105.3	Floresville				KMUZ	104.9	Mercedes		KJIC	89.3
Belton		Coleman		Dennison-Sherman		KWCB	94.3	Houston		Lake Jackson		KTXI	106.3	KKBQ	92.5
KTON-FM	106.3	KSTA-FM	107.1	KDSQ	101.7	Fort Stockton		KUHF	88.7	KGOL	107.3	Merkel		Pearsall	95.3
Big Lake		College Station		Del Rio		KPJH	94.3	KPFT	90.1	Lamesa		KMIO-FM	102.3	Pecos	
KRCT	102.3	KAMU-FM	90.9	KLKE	94.3	Fort Worth		KTSU	90.9	KCOT	104.7	Mexia		KPTX	98.3
Big Spring		KTAW	92.1	Denison		KTCU	88.7	KRLY	91.7	Lampasas			104.9	Perryton	
KWKI	95.3	Colorado City		KGCC	89.7	KESS	94.1	KLEF	93.7	KLTD	99.3	Midland		KEYE-FM	95.9
Bishop		KAUM	106.3	Denton		KSCS	96.3	KIKK-FM	94.5	Laredo		KNFM	92.3	Plains	
KFLZ	107.1	Columbus		KNTU	88.1	KEGL	97.1	KSRR	95.7	KFIX	92.7	KBAT	93.3	KPLN	90.3
Bonham		KULM	98.3	KIXK	106.1	KPLX	99.5	KFMR	97.9	KOYE	94.9	KWMJ	103.3	Plainview	
KFYZ	98.3	Commerce		Devine		KTXQ	102.1	KODA	99.1	KRRG	98.1	Mineola		KWLD	91.5
Borger		KETR	88.9	KDCI	92.1	KNONK	107.5	KILT-FM	100.3	Levelland		KMOO-FM	96.7	KATX	97.3
KDKQ	104.3	KEMM	92.1	Diboll		Fredericksburg		KLOL	101.1	KHOC	105.5	Mineral Wells		Pleasanton	
Brady		Conroe		KIPR	95.5	KFAN	101.1	KOUE	102.9	Livingston		KYXS-FM	95.9	KBOP-FM	98.3
KIXV	95.3	KJOJ	106.9	Dumas		Freeport		KRBE-FM	104.1	KETX-FM	92.1	Monahans		Port Arthur	
Breckenridge		Copperas Cove		KMRE	95.3	Freer	103.3	KHCB	105.7	Longview		KGEE	99.9	KHYS	98.5
KROO	93.5	KOOV	103.1	Eagle Pass				Humble		KYKX	105.7	KWES	102.1	Portland	
Brenham		Corpus Christi		KINL	92.7		95.9	KSBJ	88.1	Lubbock		Mount Pleasant		KITE	105.5
KWHI-FM	106.3	KKED	90.3	Eastland		Gainesville		Huntsville		KXTX	88.1	KPXI	100.7	Port Lavaca	
Bridgeport		KQIV	91.9	KVMX	96.7	KGAF-FM	94.5	KSHU	89.3	KOHM	89.1	Muleshoe		KAOC-FM	93.3
KWCS	96.7	KEXX	93.9	Edinburg		Galveston		KHUN	101.7	KSEL-FM	93.7	KMUL-FM	103.1	Prairie View	

KPVU	91.3	Sequin		Victoria		Eden		KALL-FM	107.1	Orem		KZEZ	93.5	Burlington	
Premont		KWED-FM	105.3	KVIC	95.1	KSFI	106.3	Manti		KOHS	91.7	KRDC	99.3	WRUV	90.1
KMFM	104.9	Seminole		KTXN	98.7	Emery Town		KSME	90.7	KABE	107.5	KBRE-FM	100.9	WEZF	92.9
Quannah		KIKZ-FM	106.3	KIOU	105.5	KSFI	106.3	KALL-FM	92.1	Panguitch		KSUG-FM	102.3	WQCR	98.9
KIXC	100.9	Seymour		KZEU	107.9	Escalante		KSFI	103.1	KALL-FM	96.7	Salt Lake City		WVPS	107.9
Raymondville		KSEY-FM	94.3	Waco		KSFI	95.3	KMXU	105.1	KBRE-FM	99.3	KEUR	90.1	Castleton	
KSOX-FM	101.7	Sherman		KNFO	95.5	KALL-FM	99.3	Marysville		KSUB-FM	102.3	KRCL	90.9	WIUV	91.3
Refugio		KIKM-FM	96.7	KWTX-FM	97.5	Fillmore		KSFI	92.1	Park City		KWHO-FM	93.3	Colchester	
KYOT	106.3	Sisbee		KHOO	99.9	KSFI	95.3	KALL-FM	95.3	KUER	89.5	KALL-FM	94.1	WWPV	88.7
Richardson		KNCN	101.3	KWBU	107.1	KMXU	99.3	Miford		KPCW	91.9	KISN	96.1	Johnson	
KSLL	88.1	KOUL	103.3	Whitehouse		KSFI	106.3	KUER	88.3	KSFI	95.3	KCPX-FM	98.7	WJSC	90.7
Rio Grande City		Slaton		KFML	99.3	Green River		KBRE-FM	100.9	Pleasant Grove		KSFI	100.3	Lyndonville	
KCTM	103.1	KJAK	92.7	Wichita Falls		Gunnison		KSFI	105.5	KPGR	88.1	KRSP-FM	103.5	WWLR	91.5
Robstown		Snyder		KNIN-FM	92.9	KGVB	91.7	Moab		Price		KSOP-FM	104.3	Manchester	
KBMI	97.7	KSNN-FM	101.7	KLUR	99.9	Hanksville		KUER	91.5	KUER	88.7	Smithfield			102.7
Roma		Sonora		KKOV	103.3	KALL-FM	104.9	KQIX	94.3	KARB	98.3	KVEZ	103.9	WRUT	103.1
KBMI	97.7	KVRN-FM	92.1	Winnboro		Heber		KKLX	96.7	KISN	103.9	Spanish Fork		Middlebury	
Rosenberg		Spearman		KWNS	104.9	KSFI	106.3	Monticello		KALL-FM	104.9	KTMP	106.3	WRMC	91.7
KFRD-FM	99.9	KRDF	98.3	Yoakum		KSOP-FM	107.1	KUER	91.1	KSFI	105.5	Tabiona		WCVM	100.9
Round Rock		Stephenville		KYOC	102.3	Helper		KRSJ	104.9	KSOP-FM	106.3	KUER	88.3	Montpelier	
KHCS	88.1	KWWM	98.3			KSFI	96.7	KSFI	105.5	Provo		Teasdale		WNCS	96.7
Rusk		Sulphur Springs		UTAH		Hite Marina		Monticello		KBYU	88.9	KSFI	95.3	Northfield	
KWRW	97.7	KDXE	95.9	Veaver		KALL-FM	106.3	KEUR	91.1	KLRZ	94.9	KALL-FM	99.3		93.9
San Angelo		Sweetwater		KBBD	90.1	Holden-Scipio		KRSJ	104.9	KFMY	96.1	Tooele		Plainfield	
KBIL	92.9	KXOX-FM	96.7	KSFI	105.5	KSFI	105.5	Mount Pleasant		Randolph		KTEL-FM	92.1	WGDR	91.1
KWLW	93.9	Taylor		KALL-FM	107.1	Hurricane		KMTP	91.1	KUER	88.3	Tropic		Randolph	
KIXY	94.7	KRGD	92.1	Boulder		KBRE-FM	100.9	KSFI	103.9	KUSU	91.1	KEUR	91.1	WCVR-FM	102.3
KSJI	97.5	Temple		KSFI	103.9	KZEZ	101.7	Myton		KSOP-FM	96.7	Vernal		Randolph Center	
San Antonio		KPLE	104.9	Brigham City		KALL-FM	104.9	KSFI	103.9	KALL-FM	99.3	KUER	91.5	WVTC	90.7
KURU	89.1	Terrell		KGSU	90.1	Kanab		KALL-FM	105.5	KISN	105.5	KISN	92.7	Rutland	
KSYM	90.1	KTLR	107.1	KSUB-FM	92.5	KSUB-FM	92.1	Neola		Richfield		KSFI	95.3	WRUT	97.1
KPAC	90.9	Terrell Hills		KBRE-FM	94.9	KALL-FM	94.3	KUUU	988.1	KKWZ	93.7	KALL-FM	99.3	WHWB-FM	98.9
KRTU	91.7	KESI	106.3	Centerville		KSFI	100.1	Ogden		KMXU	99.3	Washington		Saint Albans	
KITY	92.9	Texarkana		KCGL	105.5	Laketown		KVFM	95.5	KSFI	103.1	KUER	91.5	WLFE	102.3
KLLS	95.3	KTAL-FM	98.1	Circleville		KUER	91.1	KZAN	97.9	KISN	106.3	Wendover		Springfield	
KSJR	96.1	Tye		KSFI	103.9	KSOP-FM	92.1	KDAB	101.1	KALL-FM	107.1	KSFI	105.5	WCFF-FM	93.5
KAJA	97.3	KTYE	99.3	KALL-FM	106.3	KISN	102.3	KOPD	101.9	Rural Summit Country				Stowe	
KISS	99.5	Tyler	89.5	Coalville		KALL-FM	104.9	Orangeville		KUER	88.5	VERMONT		WRFB	101.7
KLLS	100.3	KROZ	92.1	KPCW	88.1	Logan		KUER	88.3	Rural Utah Country		Barre		Vergennes	
KQXT	101.9	KTYL-FM	93.1	KSFI	105.5	KUSU	91.5	KSOP-FM	92.1	KSFI	105.5	WORK	107.1	Waterbury	103.1
KTFM	102.7	KNUE	101.5	Delta		KBLO-FM	92.9	KSFI	95.3	Rural Wayne Country		Bellows Falls		White River Junction	
KVAR	104.5	Uvalde		KUER	88.1	KMXL	94.5	KALL-FM	101.7	KEUR	88.3	WTIJ	107.1	WNHV-FM	95.3
KBUC-FM	107.5	KYUF	104.9	KSFI	105.5	KSFI	105.5	Orderville		KSFI	105.5	Brattleboro		Windsor	
San Marcos		Vernon		KISN	106.3	Long Valley Junction		KALL-FM	94.3	KALL-FM	107.1	WKVT-FM	92.7		
KEYI	103.7	KVWC-FM	102.3	KALL-FM	107.1	KSFI	105.5	KSFI	100.1	St. George		WMMJ	96.7		

WVPR	89.5	WSVS-FM	104.7	Lorton		WPSK	107.1	Warsaw		Clarkston		Mc Cleary		Raymond	
VIRGINIA		Crozet		WDCJ	88.1	Radford		WNNT-FM	100.9	KFAE	90.3	KAOS	88.1	KAOS	89.7
Abingdon		WCMZ	102.3	Louisa		WVRU	89.9	Waynesboro		KCLK-FM	94.1	Mercer Island		Rienland	
WABN	92.7	Culpeper		WLSA	105.5	WRIO	101.7	WYFJ	99.3	College Place		KMIH	90.1	KFAE	89.1
Altavista		WCUL	103.1	Luray		Richlands		Williamsburg		KGTS	91.3	Moses Lake		KIOK	94.9
WKDE-FM	105.5	Danville		WQAA	103.9	WGTH	105.5	WCWM	89.1	Colville		KFAE	89.9	KMBI-FM	98.3
Amherst		WAKG	103.3	WLCC	106.3	Richmond		WQKS	96.5	KCRK	92.1	KMBI-FM	91.7	KZZK	102.7
WCNV	107.9	Exmore		Lynchburg		WDCE	90.1	Winchester		Deer Park		KSEM-FM	99.3	KHWK	106.5
Appomattox		WEXM-FM	107.5	WRVL	88.3	WRVQ	94.5	WINC-FM	92.5		107.1	KWIO-FM	100.3	Seattle	
WTTX-FM	107.1	Farmville		WGOL	90.3	WTVR-FM	98.1	WUSO	102.5	East Wenatchee		Mount Vernon		KNHC	89.5
Arlington		WUTA	90.1	WKZZ	100.1	WRXL	102.1	Woodbridge		KTRW	97.7	KSVR	90.1	KCMU	90.5
WAVA	105.1	WFLO-FM	95.7	WJJS	101.7	WEZS	103.7	WVKX	105.9	Edmonds		Newport		KUBE	93.3
Ashland		Fredericksburg		Manasas		WRFK	106.5	Yorktown		KIXI-FM	103.3	KSVR	91.5	KMPS-FM	94.1
WYFJ	100.1	WJYJ	90.5	WEZR	106.3	Roanoke		WYCS	91.5	KBIO	105.3	Northport		KIXI-FM	95.7
Berryville		WFLS-FM	93.3	Marion		WVTF	89.1	WKEZ	94.1	Ellesburg		KCRK	94.3	KYYX	96.5
WVVO	105.5	WYFJ	95.9	WMEV-FM	93.9	WVTF	90.1			KFAE	90.3	Okanogan		KING-FM	98.1
Big Stone Gap		WFVA-FM	101.5	WOLD-FM	102.3	WXLK	92.3	WASHINGTON		KXLE-FM	95.3	KHQ-FM	94.3	KEZX	98.9
WLSO-FM	93.5	Front Royal		Martinsville		WPVR	94.9	Aberdeen		KYJR	99.3	Olympia		KISW	99.9
Blacksburg		WIXV	95.3	WMVA-FM	96.3	WSLQ	99.1	KAOS	88.9	KTRW	100.9	KAOS	89.3	KSEA	100.7
WUVT	90.7	WFFV	99.3	Newport News		Salem		KJMD	99.3	Ephrata		KIXI-FM	104.9	KPLZ	101.5
WVVV	104.9	Calax		WGH-FM	97.3	WJLM	93.5	KDUX	104.7	KDNA	90.7	Omak		KZOK-FM	102.3
Blackstone		WBOB-FM	98.1	Norfolk		South Boston		Auburn		KHQ-FM	92.1	KOMW-FM	92.7	KZOK FM	102.5
WBBC	106.3	Garden City		WHRO-FM	89.5	WJLC	97.5	Bellevue	89.9	KREM	94.3	KMBI-FM	103.9	KIXI-FM	103.3
Bluefield		WXLK	92.7	WNSB	91.1	South Hill		KGRG		KTRM	95.9	KHQ-FM	107.1	KISW	104.5
WBDY-FM	106.3	WPVR	95.9	WLTY	95.7	WSHV	105.5	KASB	89.3	KDRK	97.7	Opportunity		KRAB	107.7
Buena Vista		Gretna		WNOR-FM	98.7	Stafford		KBCS	91.3	KXLY-FM	103.9	KKPL	96.1	Snelton	
WWZD	96.7	WMNA-FM	106.3	WYFI	99.7	WYFJ	92.1	KZAM	92.5	KYJR	106.3	Oroville		KSEA	103.1
Cape Charles		Grundy		WCMS-FM	100.5	Staunton		Bellingham		KPQ-FM	107.1	KOMW-FM	101.7	Spokane	
Charlottesville	96.1	WMJD	97.7	WOWI	102.9	WSGM	93.5	KUGS	89.3	Everett		KOMW-FM		KWRS	90.3
WTJU	91.3	Hampden Sydney		WNVZ	104.5	Suffolk		KISM	92.9	KSEA	103.1	Othello		KPBX	91.1
WJVA	92.7	WVHS	91.7	WXRI	105.3	WFOG	92.9	KNWR	104.3	KIXI-FM	106.3	Pasco		KSCF	91.9
WQMC	95.3	Hampton		Norton		WTID	106.9	Bremerton		KOLU	90.1	KOLU	90.1	KREM FM	92.9
WWWV	97.5	WVHOV	88.3	WNVA-FM	106.3	Sweet Briar		KWW	106.9	KLLM	103.9	KDNA	91.1	KDRK	93.7
W257AA	99.3	WWDE	101.3	Orange		WUDZ	91.5	Bridgeport		Hoquiam		KDNA		KONA-FM	95.3
Chesapeake		Harrisonburg		WJMA-FM	96.7	Tappahannock		KWIO-FM	103.9	KGHO-FM	95.3	KMBI-FM	90.9	KHQ-FM	98.1
WFOS	90.5	WMRA	90.7	Pennington Gap		WRAR-FM	105.5	Cashmere		Kennewick		Prosser		KICN	98.9
Chester		WEMC	91.7	WSWV-FM	105.5	Tasley		KPQ-FM	95.9	KGTS	88.7	KACA	101.7	KXLY-FM	99.9
WDYL	92.1	WQPO	100.7	Petersburg		WESR-FM	103.3	Centralia		KMBI-FM	98.3	Pullman		KEZE-FM	105.7
Clifton Forge		WJSY	104.3	WPVA-FM	95.3	Tazewell		KCED	91.3	KONA-FM	105.3	KFAEK	89.9	KMBI-FM	107.9
WXCF-FM	103.9	Highland Springs		WPLZ	99.3	WTZE-FM	100.1	KMNT	102.9	Longview		KZUU	90.7	Sunnyside	
Covington		WHCE	91.1	Portsmouth		Virginia Beach		KLYK	105.5	Chelan		KQQQ-FM	104.9	KREW-FM	96.7
WQO	100.9	Kilmarnock		WNHS	88.7	WNRN	94.9	KMBI-FM	90.9	Lynden		Puyallup		Tacoma	
Crewe		WKWI	101.7	Pound		Warrenton		KOZI-FM	93.5	KLYN	106.5	Queets		KPLU	88.5
		Lexington		WWLH	102.3	WQRA	94.3	Cheney		Manson		KAOS	89.7	KUPS	90.1
		WLUR	91.5	Pulaski		WWWK	107.7	KEWC	89.5	KOZI-FM	100.9			KPEC	90.9

KTOY	*91.7	WVWC	92.1	WCLG-FM	100.1	WRLO	105.3	Fort Atkinson		WZEE	104.1	WCCN-FM	107.5	WVLR	96.7
KNBO	97.3	Ceredo		WVAQ	101.9	Appleton		WSJY	107.3	Manitowoc		Neillsville		Schofield	
KBRD	103.7	WCKV	94.9	Mount Hope		WLFM	91.1	Green Bay		WKKB	92.1	WCCN-FM	107.5	WESD	89.1
KBIQ	104.7	Charleston		WTNJ	105.9	WRVM	95.3	WPNE-FM	89.3	Marathon		New London		Shawano	
KRPM	106.1	WVPN	88.5	Mulhens		WAPL	105.7	WGBB	90.1	Marinette	92.1	WNBK	93.5	WOWN	99.3
Tonasket		WBES	96.1	WPMW	92.7	Ashland		WGBW	91.5	WLSST	95.1	New Richmond		Sheboygan	
KMBI-FM	90.1	WQBE	97.5	New Martinsville		WATW-FM	95.9	WDUZ-FM	98.5	Marshfield		WIXK-FM	107.1	WSHS	91.7
Toppenish		WVA	99.9	WKGI	103.9	WWIB	100.9	WIXX	101.1	WWIB	100.1	Oconto		WWJR	97.7
KENE-FM	92.7	WTIO	102.7	Oak Hill		Baraboo		Hartford		WLJY	106.5	WOCO-FM	107.1	WVCY	101.7
Vancouver		Charles Town		WOAY-FM	94.1	WLVE	94.9	WTKM-FM	104.9	Mauston		Oshkosh		Shell Lake	
KUOW	103.9	WXVA-FM	98.3	Parkeburg		Beaver Dam		Hayward		WRJC-FM	92.1	WRST	90.3	WGMO	95.3
Walla Walla		Clarksburg		WXIL	95.1	WXRO	95.3	WOJB	88.9	Medford		WAHC	92.1	Sparta	
KMBI-FM	89.1	WVHF	92.7	WIBZ	99.3	Beloit		WRLS	92.1	WIGM-FM	99.3	WOSH	103.9	WCOW-FM	97.1
KWCW	90.5	WPDX-FM	104.9	WQAW	103.1	WBCR	90.3	WWSM-FM	101.7	Menominee Falls		Park Falls		Stevens Point	
KEXI	93.3	WKKW	106.5	Philippi		Berlin		Highland		WXJY	98.3	WNBI-FM	98.3	WWSP	89.9
KUJ-FM	95.7	Elkins		WQAB	92.1	WISS-FM	102.3	WHHI	91.3	Menomonie		Platteville		WSPT	97.9
KSXT	97.1	WCDE	90.3	Princeton		Black River Falls		Janesville		WHWC	88.3	WSUP	90.5	WWIB	100.1
Wanatchee		WELK	95.3	WAEY-FM	95.9	WWIB	102.3	WJVL	99.9	WVSS	90.7	WSWW-FM	107.1	Sturgeon Bay	
KGTS	89.5		99.3	Romney		Boscobel		Kaukauna		WMEQ	92.1	Portage		WDOR-FM	93.9
KFAE	90.1	Fairmont		WJGF	91.5	WDMP-FM	95.9	WKAU-FM	104.9	Merrill		WDDC	100.1	WSBW	100.1
KPO-FM	96.7	WFGM	97.9	Ronceverte		Brule		Kenosha		WRVM	92.1	Port Washington		Sun Prairie	
KPO-FM	102.1	Fort Gay		WRON-FM	97.7	WHSB	89.9	WGTD	91.1	WJMT-FM	93.5	WGLB-FM	100.1	WMAD	92.1
KYJR	103.1	WFGH	89.3	St. Albans		Burlington		WJZO	95.1	Middleton		Prairie du Chien		Superior	
KYJR	104.9	Grafton		WKLC-FM	105.1	WBSD	89.1	Kewaunee		WQWM	106.3	WPRE-FM	94.3	WSSU	91.3
Yakima		WTBZ	95.9	Salem		Chippewa Falls		WAUN	92.7	Milwaukee		Racine		KZIO	102.5
KYSC	88.5	Huntington		WITB	91.1	WCFW	105.5	La Crosse		WYMS	88.9	WFNY	92.1	Suring	
KDNA	91.9	WMUL	88.1	Shepherdstown		Coon Valley		WLSU	88.9	WUWM	89.7	WRKR-FM	100.7	WRVM	102.7
KATS	94.5	WHPW	89.9	WSHC	93.7	WWIB	106.3	WHLA	90.3	WUWM	89.7	Reedsburg		Tomah	
KRSE	98.3	WKKE	100.5	Summersville		Delafield		WIZM-FM	93.3	WMSE	91.7	WRDB-FM	104.9	WTMB-FM	98.9
KXDD	104.1	WHEZ	103.3	WCWV	92.9	WHAD	90.7	WSPL	95.9	WQFM	93.3	Rhineland		Tomahawk	
KFFM	107.3	WEMM	107.9	Weston		De Pere	95.9	WLXR	104.9	WKTJ	94.5	WXPR	91.7	WWIB	100.1
		Institute	90.9	WSSN	102.3	Dodgeville		WWIB	106.3	WZUU	95.7	WWIB	104.3	Two Rivers	
WEST VIRGINIA		Keyser		Westover		WDMP-FM	99.3	Ladysmith	92.7	WFMH	96.5	WRHN	107.9	WQTC	102.3
Beckley		WQZK	94.1	WVNP	88.9	Durand		WWIB	103.7	WLPX	97.3	Rice Lake		Viroqua	
WVPB	91.7	Lewisburg		Wheeling		WRDN-FM	95.9	Lancaster		WMYX	99.1	WJMC-FM	96.3	WGBM	102.3
WBKW	99.5	WKCJ	105.5	WVNP	89.9	Eagle River		WJTY	88.1	WLUM	102.1	WAQE-FM	97.7	WC	106.3
WCIR	103.7	Logan		WPHP	91.9	WERL-FM	94.3	WAXL	97.7	WBOS	102.9	Richland Center		Washburn	
Berkeley Springs		WVOW-FM	101.9	WKWK-FM	97.3	Equ Claire		Land O'Lakes		WVCY	107.7	WRCO-FM	100.9	WHIJ	90.5
WCST-FM	103.7	Marlinsburg		WCPI	98.7	WUEC	89.7	WRVM	105.5	Minocqua		Ripon		WBWA	105.9
Bethany		WKMZ	97.5	WANJ	107.5	WAL	94.1	Madison		WMMH	95.9	WRPN	90.1	Watertown	
WVBC	88.1	Milton		Williamson		WCTS	96.7	WERN	88.7	Monroe		WYUR-FM	95.9	WBII	91.5
Bethlehem		WNST-FM	106.3	WXCC	96.5	WBIZ	100.7	WORT	89.9	Neenah		River Falls		WMLW	94.1
WHLX	105.5	Morgantown		WISCONSIN		WAXX	104.5	WISM-FM	98.1	WROE	94.3	WRFW	88.7	Waukesha	
Buckhannon		WVPM	90.9	Antigo		Fond du Lac		WIBA-FM	101.5	WEMI	100.1	WEVR-FM	106.3	WCCX	104.5
WVPW	88.9	WWVU	91.7			WFON	107.1	WNWC	102.5			Sauk City		WMIL	106.1

Waupaca		Dubois		Mammoth Hot Springs		Anasco		WIOC	105.1	CJAY-1	95.1	CBXP	102.7	CFAT-2	93.9
WDUX-FM	92.7	KTAK	106.3	KMTN	103.9	WVID	90.3	Quebradillas			99.3	CHFA-4	100.7	Barriere	
Waupun		KDLY	107.1	KZLS	104.9	Arecibo		WREI	98.3	Bassano		Hinton		CBYO	104.1
WLKE	99.3	Ethete		KBZN	106.3	WNIC-FM	106.5	Ramey Air Force Base		CJAY	106.1	CHFA-4	100.7	Bella Coola	
Wausau		KIEA	89.7	Newcastle		WCMN-FM	107.3	AFCN	90.5	Calgary		CBXH	102.5	CBYD	103.5
WHRM	90.9	Evanston		KERM	96.7	Bayamon		Rio Piedras		CJAY	92.1	Jean D'Or		Big White Ski Village	
WIFC	95.5	KISN	93.5	KRCS	103.9	WGSX	94.7	WFIO	95.7	CKUA-FM	93.7	CBXH	102.5	CKIQ-1	98.1
WRVM	100.1	KSFI	96.7	KOLL	107.1	WXYX	100.7	Roosevelt Roadsrk		CHFM	98.9	Lake Louise		Bonnington	
WDEZ	101.9	KRSP-FM	98.3	Pine Bluffs		Camuy		AFCN	90.5	CBR-FM	102.1	CJAY-2	97.5	CBUD-FM	92.3
Wauwatosa		KALL-FM	105.5	KERM	96.7	WCHQ	102.9	Salinas		CKO-FM	103.1	Lethbridge		Boston Bar	92.9
WEZW	103.7		106.3	Powell		Carolina		AFCN	89.5	CBRF	103.9	CBBC	91.7	CKGO-1	106.1
West Bend		Gillette		KPCQ	92.9	WIDA-FM	90.5	San German		CKIK	105.1	CKUA-FM	99.3	Burns Lake	
WBKV-FM	92.5	KOLL	93.5	Rawlins		WOLA	107.7	WRPC	95.1	Canmore	107.3	CBRX	100.1	CBXB	99.1
West Salem		KGWY	100.7	KIQZ	92.7	Cidra-Cagues		San Juan		CBRC	97.9	CHFA-1	104.3		107.5
WISQ	100.1	Glendo		KXRC	105.5	WBRQ	97.7	WRTU	89.7	Chateh		CILA	107.7	Cache Creek	
Whitehall		KERM	104.9	Riverton		Corozal		AFCN	90.5	CBXA	103.5	Manning		CFFM-6	95.3
WHTL	102.3	Greybull		KCWC	88.1	WORO	92.5	WIPR-FM	91.3	Coutts		CBXM	100.5	Campbell River	
Whitewater		KZMQ	100.3	KTAK	93.9	Fajardo		WZNT	93.7	CBRA	90.9	Medicine Hat		CBYT	104.5
WSUW	91.7	Jackson		Rock Springs		WDOY	96.5	WPRM	98.5	Edmonton		CKUA-FM	97.3	Canal Flatsa	
Wisconsin Dells		KMTN	96.9	KQSW	96.5	Fort Allen		WIOB	99.9	CBX-FM	90.9	Peace River		CBYC	91.7
WNNO-FM	107.1	Jeffrey City		KSIT	104.5	AFCN	90.5	WIAC-FM	102.5	CJAX	92.1	CHFA-3	92.5	Cedervale	
Wisconsin Rapids		KAWY	94.5	KISN	106.3	Guayama		WKAQ-FM	104.7	CKUA-FM	94.9	CBXG	93.9	Chase	
WWIB	96.7	KDLY	104.9	Saratoga		WCRP	88.1	WCAD	105.7	CKRA	96.3	CKUA-FM5	96.9	CFFM-8	93.1
WWRW	103.3	KXRC	106.3	KWND	99.9	WSRA	106.9	Utuaado		CIRK	97.3	Pincher Creek		Chiliwack	
		La Barge		Sheridan		Hormigueros		WERR	104.1	CKXM	100.3	CBRP	97.5	CFFM-8	91.7
WYOMING		KCPX-FM	106.3	KROE-FM	94.9	WGIT	92.1	Vieques Island		CKO-FM6	101.9	Red Deer		CBUF-1	102.1
Buttalo		KSFI	107.1	KLWD	96.5	Isabella		AFCN	89.5	CISN	103.9	CFCR	98.9	Clearwater	
KLGM	92.7	Lander		Sundance		WKSA	101.5	WLID	98.9	Edson		CKUA-FM	101.3	CFFM-2	92.7
Casper		KCWC	91.1	KRCS	103.9	Levittown		VIRGIN ISLANDS		Exshaw	103.7	CBRD	102.5	Clinton	
KUWR	88.7	KDLY	97.5	Ten Sleep		WJDZ	88.9	Charlotte Amalie		CBRE	100.7	Spirit River		CFFM-4	101.3
KAWY	94.5	Laramie		KENB	93.5	Luguello		WIBS	97.9	Falher		CKUA-FM	99.5	Cranbrook	
KTRS	95.5	KUWR	91.9	KLYX	98.3	Manati		WCRN	101.1	CHFA-7	103.7	Swan Hills		CBRR	101.3
KKAZ	101.7		95.1	Torrington		WZOL	92.1	Christiansted		Fort Mc Murray		CBXS	91.5	Crawford Bay	
Cheyenne		KIOZ	102.9	KERM	98.3	WMLD	96.9	WIVI	99.5	CKUA-FM	96.7	Whitecourt		CBTE	88.3
KFBQ	97.9	KLIR	103.9	Wheatland		Mayaguez		Frederiksted		CBXN	99.3	CKUA-FM	107.1	Dawson Creek	
KKAZ	100.7	KKAZ	104.9	Worland	100.1	WOYE	94.1	WVIS	106.1	CHFA-6	101.5	BRITISH COLUMBIA		CBKQ	89.7
Cody		KVOD	107.1	KENB	95.9	WAEI-FM	96.1	St. Thomas		Fox Creek		Ayansh		CBUF-7	93.7
KYDZ	90.1	Lovell		KENB		WIOA	97.5	WUJ	88.9	CBXV	91.3	Alert Bay	102.3	Dorreen	96.1
KTAG	97.9	KENB	96.7			WKJB-FM	99.1	CANADA		Fox Lake		CBRY	105.1	Enderby	
Cokeville		Lusk		PUERTO RICO		WZAR	107.1	ALBERTA		Grande Prairie		Alexis Creek		CBYU	93.7
KSFI	106.3	KENB	103.2	Aguada		Ponce		Athabasca		CHFA-5	90.5	Atlin		CBTH	97.7
KSOP-FM	107.1	Lyman		WRFE	105.5	WEUC	88.9	CKUA-FM	98.3	CKUA-FM	100.9			Fort Fraser	
Douglas		KALL-FM	105.5	Aguadilla		WOQI	93.3								
KATH-FM	99.3	KSFI	106.3	WTPM	92.9		101.1								
KKAZ	101.7	KSOP-FM	107.1	WIVA	100.3	WZAR	101.9								

CBXR-FM	102.9	CBYL	96.7	CBYO	104.9	CISW	102.1	CBWA	101.3	CBAF-28	100.3	Marystown		Swift Current	
Fort St. James		Lytton		Quesnel		Williams Lake		Moose Lake			93.1	CBNM	90.3	CBNO	104.3
CBUV	91.9	CIAM	102.3		103.3	CIFM	97.5	CBWC	99.9	CHSR	97.5	CIOZ	96.3	Trepassey	
Fort St. John		Masset		Rock Creek			103.9	Nelson House		CBZ-FM	101.5	Millertown		CBNQ	95.3
CBYJ	88.3		92.9	CBYR	94.1	Woss		CBWO	93.7	CBAF-14	102.3	CBTL	90.1		
Golden		CBTM	103.9	Sandsptl		CBTW	92.9	Oxford House		Grand Manan		Mount St. Margaret			
CBXE	101.7	Merritt			92.9			CBWM	95.5	CBZA	103.7	CBYM	98.7	NOVA SCOTIA	
Hagensborg		CFFM-3	103.9	Savona		MANITOBA		Poplar River		Moncton		Nain, Labrador		Amherst	
CBYI	88.1	Monicetown		CFFM-1	101.9	Baldy Mountain			103.5	CBAF-26	88.5	CITN	90.1	Bay St. Lawrence	105.5
Harrison Hot Springs		CBTI	96.5	Shalaith		CBWW	105.3	Selkirk		CBA-FM	95.5	Norris Point		CBIB	90.1
CBYH	92.5	Mount Timothy			95.1	Brandon		CFQX	92.9	CBAF-FM	98.3		93.7	Bridgewater	
Hope		CFFM-5	99.7	Smithers	96.1	CBWS	92.7	Shamattawa		CFQM	103.9	Port au Port		CKBW-FM	94.1
CBUE	101.7	Nakusp		CBRS	97.5	CJCM	96.1		105.1	CKUM	105.7	CBAF-16	94.3	Cheticamp	
Houston		CKAL-1	103.1	Sorrento		CBWV	97.9	Snow Lake		Neguac		Port Hope Simpson		CBAF-17	103.9
CBUR	102.1	Nelson		CHNL-3	102.1	CKSB-8	99.5	CBWL	95.5	CBAF-22	105.7	CBNP	105.1	CBIC	107.1
	105.5	CBYN	98.7	CKIR	107.1	Brochet		South Indian Lake		Newcastle		Portland Creek		Church Point	
Invermere		New Derrver		Sparwood			105.1	CBWQ	95.5	CBA	97.9	CBYP	89.5	CBAF-18	95.9
CJAY	99.7	CKAL-2	93.5	CBYS	105.7	Esterville		The Pas		Saint John		Port Saunders		Digby	
CFWL-1	107.1	New Westminster		Squamish		CBWE	95.5	CKSB-3	93.7	CJYC	98.9		90.5		104.7
Kamloops		CFMI	101.1	CISO	104.9	Fairford		CBWJ	94.5	CKO-FM10	99.7	Postville, Lab.		Eskasoni Indian	
CBYK	94.1	North Bend		Terrace		CBWZ	104.3	Thompson		NEWFOUNDLAND		CBND	105.1	Reserve	
CBUF-6	96.5	CBRN	90.7	CBTH	95.3	Fisher Branch		CKSB-5	99.9	Argentia		Ramea			99.1
CFFM	98.3	Ocean Falls		CBUF-3	96.9	CBWX	95.7	CBWK	100.9	CFOZ	100.3	CBNR	95.5	Halifax	
Kaslo		CBXO	92.1		103.1	Flin Flon		Wassagomach		Baie Verte		Rattling Brook		CBHA	90.5
CKAL-3	95.3	One-Hundred Mile House		Trail		CBWF	90.9	CBWD	105.1	CBTB	97.1	CHOS	95.9	CBAF-19	92.3
Kelowna		CBUS	91.3	CBTA	106.7	CKSB-4	99.9	Winnipeg		CITB		Red Rocks		CIOO	100.1
CBTK	95.7		100.5	Vancouver		Gillam		CITI	92.1	Bonavista		CKSS	96.9	CHFX	101.9
CBUF-2	99.1	Osyoos		CKO-FM4	96.1		97.1	CHIQ	94.3	CJOZ	92.1	Roddickton		CBH-FM	102.7
CHIM	104.7	CBUB	95.3	CJAZ	96.9	Gods Lake Narrows		CHMM	97.5	Carmanville		CBTR	92.9	CKO-FM9	103.5
Kernano		Pemberton		CBUF	97.7	CBWN	99.9	CBW-FM	98.3		92.5	St. Albans		Kentville	
CKEM	97.9	CISP	104.5	CITR	101.9	Grand Rapids		CKO-FM7	99.1	Churchill Falls, Lab.		CBNS	99.1	CKWM	97.7
Keremeos		Pentlcton		CFRO	102.7	CBWH	101.5	Winnipeg		CFLC	97.9	St. Andrews		Liverpool	
	98.9	CBTP	93.3	CHQM-FM	103.5	Ilford		CKWG	103.1	Corner Brook		CFCV	97.7	CKBW-1	94.5
Kersley		CKOR	97.1	CBU-FM	105.7	CBWS	94.7			CKOZ	92.3	St. Anthony		CBHL	97.1
CBYY	90.9	CIGV	100.7	Vanderhoof	95.9	Jackhead		NEW BRUNSWICK		Deer Lake	96.3	CFNN	97.9	Margaree	
Kitimat	92.9	Port Clements		CBRV	96.7	CBWY	92.7	Boicetown		CFDL	97.9	St. Johns		CBAF-15	101.9
CBUK	101.1	CBYD	102.9	Vavenby		Jenpeg		CBZB	90.9	Fleur De Lys		CHOZ	93.9	Middleton	
CBUF-5	105.1	Prince George		CBYZ	91.9			Bon Accord		CBTC	94.5	VOCM-FM	97.5	CBHM	106.5
Kitwancool		CBYG	91.5	Vernon		Leaf Rapids	96.1	CBZC	103.3	Goose Bay, Lab.			98.3	CBAF-21	107.5
	92.1		94.3	CBYV	105.5	CBWP	94.5	Campbellton		CFGB-FM	89.5	CKO-FM11	101.9	New Glasgow	
Kitwanga		CBUF-4	95.5	Victoria		CBAE			88.1	Hampden		CBAF-20	105.9	CBAF-27	88.7
	94.3	CIOI	100.5	CFMS	98.5	CHGG	96.1	CBAF-23	88.9	CBTJ	101.5	CBN-FM	106.9	CBHN	89.5
Logan Lake		Prince Rupert			107.3	Little Grand Rapids		Doaktown		Makkovik, Lab.		Stephenville		Shelburne	
CBYE	92.9		101.9	Whistler		CBWR	101.5	CBZD	96.5	CIML	99.5		89.7	CKBW-2	93.1
Lumby		Princeton Queen Charlotte		CBYW	100.1	Mangotagan		Edmundston		CBNI	103.5	CIOS	98.5	Sydney	

CKPE	94.9	CBOC	95.5	CJBC-2	99.5	Osnaburgh		CBQS	95 /	Wunnummin Lake		Causapscal		Fort George	
CBAF 24	95.9	CBOF-6	98.1	CBCK	107.5	CKCU	104.5	Slate Falls		CJPM	90.1	CBGFSM1	98.3	CBFG	103.5
CBI-FM	105.9	CFLG	104.5	Kitchener		OttawaL			90.1			Chambord		CBMP	105.1
Truro		Deer Lake		CKGL	96.7	Smiths Falls				PRINCE EDWARD ISLAND			95.5	Fort Rupert	
CBHC	89.1	CBQH	100.9	CKWR	98.7	CKUE	101.1	Sudbury		Charlottetown		Champion	92.3	CBFH	103.5
CKTO	100.9	CKSB-6	102.7	CFCA	105.3	CBOF-FM	102.5	CIGM	92.7	CBAF-29	88.1		93.1	CBMQ	105.1
Yarmouth		Fort Albany	90.1	Lansdowne House	90.1	CBO-FM	103.3	CBON	98.1	CHLQ	93.1	Chandler		Gagnon	
	92.1	CBCL	102.3	Leamington		CKBY	105.3	CBOS	99.9	CBCT	96.9	CBVB	103.7	CFJO	104.1
	107.3	Fort Frances		CBEF-1	103.1	CHEZ	106.1	CJMX	105.3			Chapeau		Gaspe	
ONTARIO			89.1	Little Current	97.5	CKO-FM1	106.9			QUEBEC		Chapleau			88.5
Atikokan		Fort Hope		London		Owen Sound		Thunder Bay		Asbestos		CBOF-9	88.7		89.3
CBLA	90.1	CBCH	101.5	CJBX	92.7	CBCE	98.7	CBON-20	89.3	CBF-11	96.1	CHIP-1	94.5	CJRG	103.1
Attawapiskat		Fort Severn		CBCL	93.5	Pembroke		CJSD	94.3	Baie-Comeau		Chateauguay		Grand-Vallee	104.1
CBCA	101.5		90.1	CHRW	94.7	CBCE	96.7	CBO-FM	101.7	CBMI		CHAI	101.9	Grose-Morne	94.5
Barrie		Fry Lake		CFPL-FM	95.9	Penetanguishene		Tillsonburg				Chibougamau		Harrington Harbour	
CHAY	93.1		90.1	CKO-FM3	97.5	CJBC-3	96.5	CKOT-FM	101.3	Betsiamites			90.3	CBMU	95.3
Bearskin Lake	90.1	Geraldton		CJBC-4	99.3	CFMP	101.5	Timmins		Blanc Sablon		Chibougamau CFB	91.9	CBSI-15	100.5
Belleville		CBON-22	93.7	CBBL	100.5	CBBP	103.9	CFTI	92.1	CBMS	102.7		103.1	Havre St. Pierre	
CBBB	94.3	Gogama		CIXX	106.9	CKQM	105.1		96.1	CBSI-21	107.1	Chicoutimi			95.1
CJBC-1	95.5	CBON-21	104.9	Longlac		CJBC-5	106.3	Toronto		Brisay		CJAB	96.7		99.3
CIGL	97.1	Guelph		MacDowell Lake		Pickle Lake			91.1	CKBJ-6	93.1	CBJ-FM	100.9		100.1
Big Trout Lake		CFRU	93.3		90.1	CBQP	105.1	CJRT	94.1	CHLG-6	95.1	CBJE	107.9		100.9
CFTL	100.3	CKLA	106.1	Manitouwadge		Pikangikum		CHFI	98.1	Camp Chaumont	95.1	Cloridorme			101.7
Brampton		Hamilton		CBON-23	96.9	CBQU	100.3	CKOFM2	99.1	CKBJ-4	96.1		105.1	Hull	
CFNY	102.1	CFMU	93.3	Marathon		Poplar Hill		CKFM	99.9	Camp Fontage		Coaticook		CIMF	94.9
Brantford		CKDS	95.3	CFNO	98.1	Red Lake		CHIN-FM	100.7	CKBJ-7	93.1		104.5	Iles de la Madeleine	
CKPC-FM	92.1	Hearst		Muskrat Dam		CBEA	90.5	CHUM-FM	104.5	Camp LG1		Dolbeau		CBGA-8	93.5
Brockville		CBCC	91.9	CFMD	105.1	Renfrew		CILQ	107.1	CHLG-8	95.1	CBJ-3	93.1	CBVM	95.3
CBOB	100.3	Kapuskasing	90.7	Niagara Falls		CBOF-8	98.7	Waterloo		Camp LG2		Drummondville		Jonquiere	
CBOF-7	102.1	CBOK	105.1	CIAO	104.9	Sachigo Lake		CKMS	94.5	CKBJ-2	98.1	CBF-FM1	104.3	CHOC	92.5
CHXL	103.7	Kasabonika Lake		Nipigon	97.3	CFEY	90.1	Wawa		Camp LG3		Duplante		Kahnawake	
CBBA	104.9	CFKP	90.1	CBQY	98.9	St. Catharines			88.3	CKBJ	98.5	CKBJ-5	99.1	CKRK	103.5
Burlington		Kashechewan		North Bay		CJQR	97.7	Weagamow		CHLG	100.5	CHLG-5	100.1	Koartak	90.1
CING	107.9		90.1	CBON-17	95.1	CHRE	105.7	Whitney	90.1	Camp LG4		Eastmain		Kuujuaup	
Cat Lake		Kenora		CBON	96.1	Sandy Lake			98.5	CKBJ-1	96.1	CHLG-4	105.1		89.9
	90.1	CKSB-7	93.5	CKAT	101.9	CBQV	101.1	Windsor		CHLG-1	100.1	Escuminac			96.9
Chatham		CBQX	98.7	North Spirit Lake		Sarnia		CJOM	88.7	Camp Manic Five		CBVA	98.1	Lac au Saumon	
CJJB	94.3	Kingfisher Lake			90.1	CJFI	99.9	CJOM	88.7	Camp Mirage		Fermont		CBGS	97.3
CBEE	95.1		90.1	Ogaki		CBSM	89.5	CBE-FM	89.9		95.1	CFMF	103.1	Lac Megantic	
Cobourg		Kingston			90.1	CHAS	100.5	CKJY	93.9	Cap Aux Meules		CBMR	105.1	CBF-6	93.7
CFMX	103.1	CFRC-FM	91.9	Orillia		CJOM	104.3	Windham		CFIM	92.7	Fort Chimo		Laforge	
Constance Lake		CBBK	92.9	CBCO	105.9	Savant Lake		CKNX-FM	101.7	Carleton		CKUJ	90.1	CHLG-7	99.9
	90.1	CFMK	96.3	Oshawa		CBQL	104.9	Winixk	90.1			Fort Coulonge		La Malbaie	
Cornwall		CFLY	98.3	CKQT	94.9	Sioux Narrows						CHIP	101.5	CBV-6	92.9

L'Anse-a-Valleau	101.5	Natashquan	90.1	CBMY	104.3	Val-D'Or	101.1	CFMQ	92.1	Grise Fiord	107.1	Aguascalientes, Au.	XHJL	91.5
La Pocatiere	107.1	New Carlisle	101.5	Rouyn-Noranda	88.7	Verdun	96.9	CKO-FM8	94.5	Hait Beach	106.1	XHAUGC	XHCD	92.3
La Romaine	90.1	CBVN	101.5	CIRC	96.5	CKOI	96.9	CBK-FM	96.9	Hay river	107.3	Apizaco, Tla.	XHSC	93.9
La Tabatiere	100.1	New Richmond	103.5	CHLM	99.9	Victoriaville	92.7	CBKF	97.7	CKHR	107.3	XHXZ	XHDK	94.7
CBSI-17	100.1	CBVR	103.5	Ste. Adele	99.9	CBF-12	92.7	CIZL	98.9	Holman Island	105.1	Chihuahua, Chi.	XHRO	95.5
CBMT	101.5	Nouveau Comptoir	103.5	CIME	99.5	Waswanipi	101.5	CKIT	104.9	Igloolik	105.1	XHRG	XEJB-FM	96.3
Lavel	105.7	CBFW	103.5	St. Augustin	90.1	Saskatoon	101.5	CJUS	89.7	CUII	105.1	XHPL	XEBA-FM	97.1
CFGL	105.7	CBMW	105.1	St. Augustin-Seguenay	102.3	Southend	105.1	CFMC	103.9	Pangnirtung	105.1	Ciudad Camargo, Ch.	XETIA-FM	97.9
Les Escoumins	95.1	Old Fort Bay	91.7	St. Augustin-Seguenay	102.3	CBKP	91.7	CBKS	105.5	Pangnirtung	105.1	Ciudad Guzman, Jal.	XHLS	99.5
Lithium Mines	103.5	CBSI-19	91.7	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBKB	101.5	Pangnirtung	105.1	XHPZ	XHAV	100.3
Longueuil	98.5	CBMV	95.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBKI	95.5	Pangnirtung	105.1	Ciudad Juarez, Chi.	XHMA	101.1
CIEL	98.5	CBM	95.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHPX	XEAD-FM	101.9
Magog	106.1	Payne Bay	90.1	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHH	XEHL-FM	102.7
CIMO	106.1	Perce	91.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHEM	XHUG	104.3
Maniwaki	97.3	CBVP	91.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHTO	XHOZ	106.7
CHGA	97.3	Pohenegamook	104.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHIM	Hermosillo, So.	93.9
Manouane	95.1	Pointe Bleue	107.3	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHGU	XHSD	100.3
CBFA-1	103.5	Povungnituk	99.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHNZ	Irapuato, Gto.	93.5
Marsoui	89.9	CKPV	99.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Sanikiluaq	XHJTA	94.3
Mingan	90.1	Quebec	89.1	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Snnowdrift	XHNH	95.1
Mistassini Station	100.7	CKPV	89.1	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Coatzacoalcas, Ver.	XHD	96.5
CBFM	101.5	CJMF	93.3	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHNE	XHD	96.5
CBVS	101.5	CBV-FM	95.3	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHTD	XHD	96.5
Mont-Laurier	96.3	CHOI	98.1	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHOM	XHTZ	96.9
CBF-9	96.3	CIKI	98.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Cordoba, Ver.	XHOI	92.3
Mont-Louis-en-Haut	106.1	CBVE	104.7	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHPT	XHMD	96.7
Montreal	92.5	CITF	107.3	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Chautla, Mor.	XHPO	97.5
CFOR	93.5	Radisson	92.3	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHCU	XHLG	98.3
CBM-FM	94.3	CBF-7	100.1	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Cuernavaca, Mor.	XHSO	99.9
CKMF	95.9	Rapide-de-Joachims	107.5	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHCT	XHMD	104.7
CJFM	97.7	CHIP-2	107.5	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHLM	Martinez de la Torre, Ver.	104.5
CHOM	100.7	Rimouski	101.5	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHNG	XEHU-FM	104.5
CBF-FM	102.3	CJBR-FM	101.5	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHTB	Matamoros, Ta.	97.7
CINQ	104.5	CKLE	104.5	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHNA	XEWF-FM	97.7
CIBL	104.5	Riviere au Renard	97.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Culiacan, Sin.	XHML	101.5
CITE	107.3	CJRE	97.9	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Ensenada, BJ	XHMA	99.5
		Riviere du Loup	103.7	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	Guadalajara, Jal.	XHAT	99.5
		CION	103.7	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHRA	Merida, Yuc.	97.7
		Riviere St-Paul	103.1	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1	XHOY	XHGL	97.7
		CBSI-20	103.1	St. Augustin-Seguenay	102.3	St. Stanely Mission	95.5	CBK4	91.9	Pangnirtung	105.1		Mexicali, BJ	

XHFE	89.9	XHMF	104.5	XHQC	93.5	XHOH	94.1
XHJC	91.5	XHPJ	106.9	XHRP	94.7	XHRN	96.5
XHPF	101.9	XHMN	107.7	XHSA	100.9	XHPB	99.7
XHVG	103.3	Morelia, Mi.		San Luis, So.		XHPR	101.3
XHBA	104.1	XHKW	91.5		106.3	XHVE	102.1
XHMC	104.9	Morelia		San Luis Potosi SLP		XHTS	102.9
Mexico DF		XHMO	93.9	XHOB	96.1	Villahermosa, Tab.	
XHRF	88.1	Nogales, Son.		XHOD	96.9	XHOP	96.5
XHM	88.9	XHOT	102.7	XHOK	98.5	Zamora, Mic.	
XEBS-FM	89.7	XHRZ	103.5	XHTL	99.3	XHZN	92.1
WEDA-FM	90.5	XHNI	105.1	XHPM	100.1		
XHQK	91.3	XHSN	106.6	Tampico, Tam.			
XHFO	92.1	Nuevo Laredo, Tams.		XHOK	95.3		
XHSH	95.3	XHNOE	91.3	XHON	96.1		
XEUN-FM	96.1	XHNK	99.3	XHRW	99.3		
XERC-FM	97.7	XHNM	100.3	Tapachula, Chi.			
XELA-FM	98.5	XXHMMW	102.3	XHMX	97.9		
XHPOP	99.3	Oaxaca, Oax		Tehuacan, Pue.			
XHMM	100.1	XHNR	98.5	XHTF	99.9		
XHSON	100.9	Piedras Negras, Coa.		Tepic, Nay.			
XEX-FM	101.7	XHTA	94.5	XHNF	97.7		
XHV	102.5	XHSL	99.1	Tijuana BJ			
XERPM-FM	103.3	XHSG	99.9	XHIS	90.3		
XEDF-FM	104.1		102.5	XETRAF-M	91.1		
XHOF	105.7	XHRE	105.5	XHRM	92.5		
XHD-FM	106.5	XHNE	106.3	XHTY	94.5		
XEQF-FM	107.3	Peubla, Peu.		XHQS	95.7		
Monclova, Coa.		XHNP	89.3	XHQF	98.9		
XHMS	99.5	XHRS	90.1	XHB	99.7		
XHTF	100.3	XHZM	92.5		102.5		
	107.1	XHRH	93.3	XHERS	104.5		
Monterrey, NL		XHJE	94.1	XHFG	107.3		
XHXL	91.7	XHORO	94.9	Toluca, Max			
XHSRO	92.5	Puerto Vallarta, Jal.		XHRJ	92.5		
XHQQ	93.3	XHME	89.5	XHNX	98.9		
XHNL	94.1	Queretaro, Oro.		XHOA	99.7		
XHRK	95.7	XHOE	95.5	XHAZ	101.3		
XHSR	97.3	Reynosa, Ta.		Torreón, Co.			
XHRL	98.1	XHAAA	93.1	XHMP	95.5		
XHJD	98.9	XHRT	95.3	XHPE	97.1		
XHSP	99.7	XHRR	102.5	Tuxtla Gutierrez, Ch.			
XHMG	100.5	XHRY	103.3	XHTG	96.9		
XHIL	101.3	Sabinas, Coa		XHCQ	98.5		
XHOI	102.1	XHEC	91.9	Veracruz, Ver.			
	103.7	Saltillo, Coa.		XHPS	93.3		

ST. PIERRE & MIQUELON

St. Pierre 97.9

Above information used from "FM Atlas and Station Directory"
with permission of FM Atlas Publishing Co.

This data as of 1983.

□ STANDARD FREQUENCY AND TIME SIGNAL STATIONS

This electromagnetic wave gives accurate time announcements. Due to the fact that it has very accurate transmission frequencies, it can be used to check frequencies of receivers and can also be used to receive radio warnings by morse code.

ARGENTINA

LOL	5000	10000	15000kHz
	1100—1200	1400—1500	
	1700—1800	2000—2100	
	2300—2400		
LQB9	8167.5kHz		
	2200—2205	2345—2350	
LQC20	17550kHz		
	1000—1005	1145—1150	

AUSTRALIA

VNG	4500kHz	0945—2130
	7500kHz	2245—2230
	12000kHz	2145—0930

BRAZIL

PPE	8721kHz	0025—0030	1125—1130
		1325—1330	1825—1830

2025—2030 2325—2330

PPR	435	4244	8634	12687	16984
	17194.4	22352.5	22420kHz		
	0125—0130	1425—1430			
	2125—2130				

CANADA

CHU	3330	7335	14670kHz
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CHILE

CCV	4298	8558kHz
	1155—1200	1555—1600
	1955—2000	0055—0100

CHINA

BPM	10000kHz
	1600—2200 (Monday—Friday)
	0300—0600

15000kHz 1700—0800

CHECHOSLOVAKIA

OMA	2500kHz	24h.
OLB5	3170kHz	24h.

ECUADOR

HD210A	3810kHz	000—1200
	5000kHz	1200—1300
	7600kHz	1300—2400

FRANCE

FFH	2500kHz	0800	1625
FTH42	7428kHz	0900	2100
FTK77	10775kHz	0800	2000
FTN87	13873kHz	0930	1300
		2230	

FEDERAL REPUBLIC OF GERMANY

DAM 2614 4265 6475 8638.5
 12763.5kHz
 2355—0006
 2614 2775 8638.5 16980.4kHz
 1155—1206

DAO 2775kHz 2355—0006

GERMAN DEMOCRATIC REPUBLIC

Y3S 4525kHz 24h.

HONG KONG

VPS 500kHz 0200 0400 0600
 0800 1000 1200
 1400 1600 1800
 2000 2200 2400

VPS8 3842kHz 1100 1300 1500
 1700 1900 2100

VPS35 8539kHz 0100 0300 0500
 0700 0900 1100
 1300 1500 1700
 1900 2100 2300

VPS60 13020kHz 0100 0300 0500
 0700 0900 1100
 1300 1500

VPS80 17096kHz 2100 2300 0100
 0300 0500 0700
 0900 1100 1300

VPS22 22536kHz 0100 0300 0500
 0700 0900

INDIA

ATA 5000 10000 15000kHz
 0330—1430 (Monday—Saturday)
 0430—0830 (Sunday and holiday)

VWC 12745kHz 0825—0830
 4286kHz 1625—1630

INDONESIA

PKI 8542kHz 0055—0100

PLC 11440kHz 0055—0100

ITALY

IAM 5000kHz 0730—0830
 1030—1130
 (Monday—Saturday)

IBF 5000kHz
 0645—0700 0845—0900 0945—1000
 1045—1100 1145—1200 1245—1300
 1345—1400 1445—1500 1545—1600

1645—1700 1745—1800
 (Monday—Saturday)

JAPAN

JJY 2500 5000 8000 10000 15000kHz
 24h.

MEXICO

XBA 6976.7, 13953.6kHz

NEW ZEALAND

ZLF 2500kHz 0100—0400(Wendnesday)

PERU

OBC 8650 12307kHz
 1555—1600 1855—1900 0155—0200

SOUTH AFRICA

ZUO 2500kHz 1800—0400
 5000 24h.

ZSC 4291 8461 12724
 17018 22455kHz
 0755—0800 1655—1700

SPAIN

EBC 12008kHz 0959–1025
6840kHz 1029–1055

SRI LANKA

4PB 8473kHz
0555–0600 1325–1330

TAIWAN

BSF 5000 15000kHz
0100–0900
(00–05 10–15 20–25 30–35)
(40–45 50–55)

UNITED KINGDOM

MSF 2500 5000 10000kHz
24h.

UNITED STATES OF AMERICA

WWV 2500 5000 10000 15000kHz
24h.

WWVH 2500 5000 10000 15000kHz
24h.

NPN 4955 8150 13380 21760kHz
0555–0500 1155–1200 1755–1800

2355–2400

NMO 4525 9050 13655 16457.5
22472kHz
0055–0100 0255–0300 0655–0700
2155–2200

NPO 4445 10440.5 12804kHz
0550–0600 1155–1200
1755–1800 2335–2400

NPG 3268 6428.5 9277.5kHz
0055–0100 0255–6300
0655–0700 2155–2200

USSR

RWM 4996 9996 14996kHz 24h.
RID 5004 10004 15004 24h.
RTA 10000kHz
0200–0500 1400–1730 1800–0130
15000kHz

0630–0930 1000–1330
RCH 2500kHz 0530–0400
5000kHz 0200–0400 1400–1730
1800–0130
10000kHz 0530–0930 1000–1330

VENEZUELA

YVTO 6100kHz 24h.

☐ SHORTWAVE WEATHER BROADCAST

Public Coast Stations

Location	Call sign	Frequency (kHz)
Tampa	FL WFA	2550 2466
New Orleans	LA WAK	2482 2598 4419
Galveston	TX KQP	2530
Corpus Christi	TX KCC	2538
Seattle	WA KOW	2522 2482
New York	NY WQX	2482 2522 2590
San Francisco	CA KLH	2506 2450
Boston	MA WOU	2450 2506 2566
Baltimore	MD WMH	2400
Norfolk	VA WAE/WGB	2450 2538
Jacksonville	FL WNJ	2566
Mobile	AL WLO	2572
Miami	FL WDR	2442 2490 2514

Military Weather Information

Location	Frequency (kHz)
Halifax	3046 6746 11249
Lahr	5690 6753 13231
Edmonton	6705 6753 15035
Trenton	6705 6753 15035
St. Johns	6705 15035

Volmet Broadcast (SSB/USB)

Weather reports and forecasts for aircraft.

PACIFIC

H+05 H+35

OAKLAND RADIO

San Francisco

Los Angeles

Seattle

Portland

Ontario

Los Angeles

San Francisco

Seattle

2863, 6679, 8828, 13282kHz

H+10 H+40

TOKYO RADIO

New Tokyo

Tokyo

Chitose

Nagoya

Osaka

Fukuoka

Seoul

New Tokyo

2863 6679 8828 13282 kHz

H+15 H+45

HONG KONG RADIO

Cheung Chau

Naha Okinawa

Taipei

Kao Hsiung

Manila

Macao

Hong Kong

2863 6679 8828 13282 kHz

H+20 H+50

HONOLULU RADIO

Wake

Guam

Kahului

Wake

Kahului

Hilo

2863 6679 8828 13282 kHz

H+25 H+55

ANCHORAGE RADIO

Fairbanks

Cold Bay

King Salmon

Shemya

Vancouver

Anchorage

Cold Bay

2863 6679 8828 13282 kHz

EUROPE

H+05-15 H+35-45

BEN GURION RADIO

Ben Gurion

Ramat David

Elat

Athenes

Ankara

Istambul

Tel Aviv

2998 3413 5640 6580 8957

11378 13264 kHz

H+15-25 H+45-55

PRAGUE RADIO

Prague

Bratislava

Brno

Vienna

Berlin

Warsaw

Munich

Budapest

Moscow

2998 3413 5640 6580 8957

11378 13264 kHz

H+25—35

H+55—05

PARIS RADIO

Paris/Le Bourget

Paris/Orley

Tours

Reims

Bordeaux

Toulouse

Marseille

Lyon

Nice

Algiers

2998 3413 5640 6580 8957

11378 13264 kHz

SHANNON AERADIO

H+00—25

H+30—55

Shannon

Madrid

Prestwick

London-Heathrow

Amsterdam

Oslo

Copenhagen

Athens

Paris

(2200-1000)

April—October

(1800-1200)

November—March

DAY:

NIGHT:

5592

2905

8870

5592

13270 kHz

8870 kHz

SOUTHEAST ASIA

H+00

H+30

SYDNEY RADIO

Sydney

Brisbane

Darwin

Adelaide

Alice Springs

note-1

2965 3458 5673 6676 8849

11387 13285 kHz

H+05

H+35

CALCUTTA TADIO

Gaya

Delhi

note-2

3458 kHz 1200-0300

11387 kHz 0300-1300

6676 kHz 24h

H+10

H+40

BANGKOK RADIO

Rangoon

Saigon

Bangkok

note-3

6676 11387 kHz

2310-1145

3458 6676

1210-2245

H+15 H+45

KARACHI RADIO

Nawabshah

Jiwani

note-4

3458 6676 kHz

1610-0140

6676 11387

0140-1510

H+20 H+50

SINGAPORE RADIO

Kuala Lumpur

Kota Kinabalu

Penang

note-5

6676 kHz 1230-2230

11387 kHz 2230-1230

H+25 H+55

BOMBAY RADIO

Ahmadabad

Calcutta

note-6

3458 6676 11387

MIDDLE EAST

H+00 H+30

BAGHDAD RADIO

Abadan

Basrah

2956 5589 8945 11393 kHz

H+05 H+35

TEHRAN RADIO

Abadan

Tehran

2956 5589 8945 11393 kHz

H+10 H+40

BAHRAIN RADIO

Dhahran

Kuwait

2956 5589 8945 11393 kHz

H+15 H+45

BEYROUTE RADIO

Nicosia

Cairo

Amman

Jeddah

Athens

2956 5589

8945 11393 kHz

H+25 H+55

YESILKOY RADIO

Istanbul

Ankara

Athens

2956 5589 8945 11393 kHz

ATLANTIC

H+00 H+30

NEW YORK RADIO

2905 3485 5592 6604 8870

10051 13270 13276 kHz

H+20 H+50

GANDER AERADIO

2905 3485 5592 6604 8870

10051 13270 13276 kHz

ALGER RADIO

H+00 H+10 H+40

Alger

Annaba

Oran

Tripoli

Benghazi

2860 3404 5499 6538 8852

10057 13261 kHz

DAKAR AERADIO

H+15—25 H+45—55

Dakar

Lome

Bamako

Lagos

Conakry

Abidjan

Niamey

Libreville

2860 3404 5499 6538 8852

10057 13261 kHz

TANANARIVE RADIO

H+25 H+55

Tananarive

Saint Denis

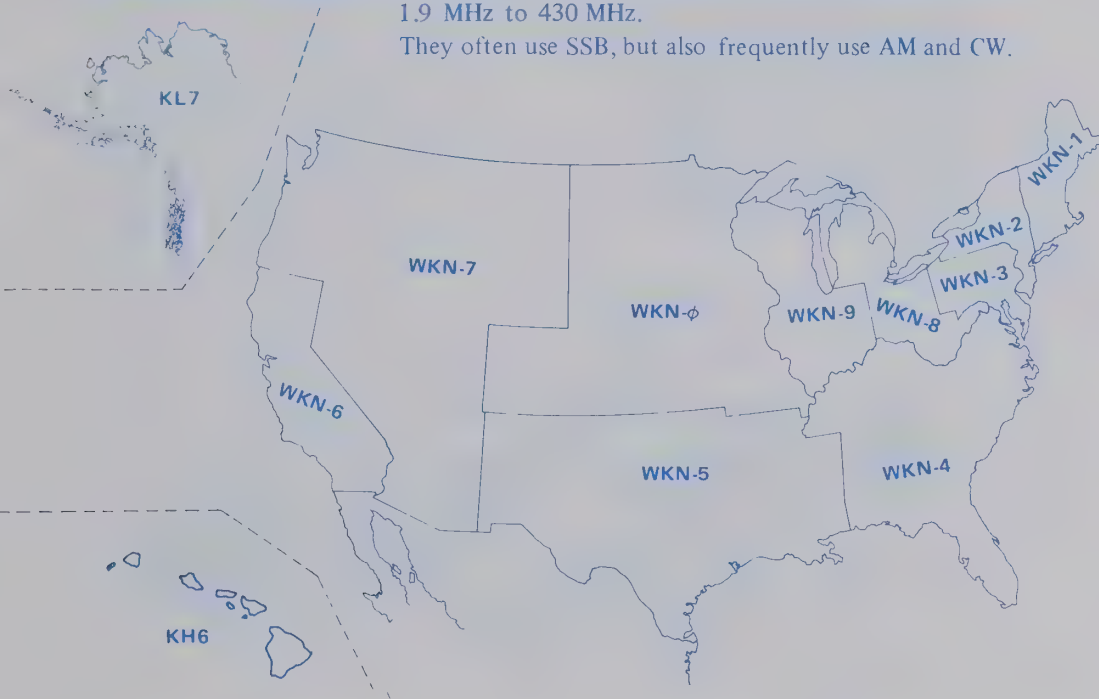
Diego Suarez

2881 5601 10087 13279 kHz

■ AMATEUR RADIO

Frequencies used by Amateur radio stations are from 1.9 MHz to 430 MHz.

They often use SSB, but also frequently use AM and CW.



WKN-1	CONNECTICUT, DELAWARE, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, VERMONT
WKN-2	NEW YORK, NEW JERSEY
WKN-3	PENNSYLVANIA, WASHINGTON DC
WKN-4	ALABAMA, FLORIDA, GEORGIA, KENTUCKY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE VIRGINIA
WKN-5	ARKANSAS, COLORADO, LOUISIANA, MISSISSIPPI, NEW MEXICO, OKLAHOMA, TEXAS
WKN-6	CALIFORNIA
WKN-7	ARIZONA, IDAHO, MONTANA, NEVADA, OREGON, UTAH, WASHINGTON, WYOMING
WKN-8	MICHIGAN, OHIO, WEST VIRGINIA
WKN-9	ILLINOIS, INDIANA, WISCONSIN
WKN-10	IOWA, KANSAS, MINNESOTA, MISSOURI, NEBRASKA, NORTH DAKOTA, SOUTH DAKOTA
KL7	ALASKA
KH6	HAWAII

■ CITIZEN BAND

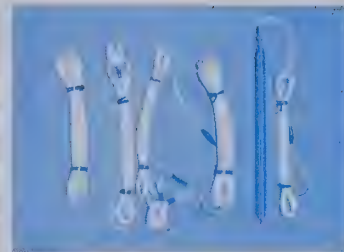
CHANNEL FREQUENCIES

CB Ch.	Channel Frequencies	CB. Ch.	Channel Frequencies
1.	26.965 MHz	21.	27.215 MHz
2.	26.975 MHz	22.	27.225 MHz
3.	26.985 MHz	23.	27.255 MHz
4.	27.005 MHz	24.	27.235 MHz
5.	27.015 MHz	25.	27.245 MHz
6.	270.25 MHz	26.	27.265 MHz
7.	27.035 MHz	27.	27.275 MHz
8.	27.055 MHz	28.	27.285 MHz
9.	27.065 MHz (Emergency)	29.	27.295 MHz
10.	27.075 MHz	30.	27.305 MHz
11.	27.085 MHz (Calling channel)	31.	27.315 MHz
12.	27.105 MHz	32.	27.325 MHz
13.	27.115 MHz	33.	27.335 MHz
14.	27.125 MHz	34.	27.345 MHz
15.	27.135 MHz	35.	27.355 MHz
16.	27.155 MHz	36.	27.365 MHz
17.	27.165 MHz	37.	27.375 MHz
18.	27.175 MHz	38.	27.385 MHz
19.	27.185 MHz (Truckers)	39.	27.395 MHz
20.	27.205 MHz	40.	27.405 MHz

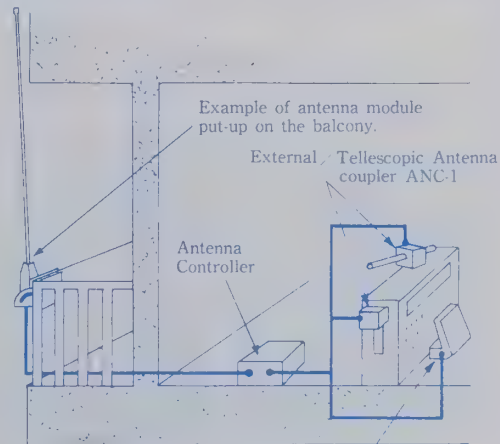
CB TRUCKERS' CHANNELS

ALABAMA: 10, 11, 21	MONTANA: 10, 11, 15
ALASKA: 21	NEBRASKA: 10, 17, 21
ARIZONA: 17, 21	NEVADA: 16, 17, 21
ARKANSAS: 10	NEW HAMPSHIRE: 10
CALIFORNIA: 10, 15, 17, 21	NEW JERSEY: 10, 15
COLORADO: 10, 21	NEW MEXICO: 15, 17, 21
CONNECTICUT: 10	NEW YORK: 10, 15
DELAWARE: 10	NORTH CAROLINA: 10, 11, 12
DISTRICT OF COLUMBIA:	NORTH DAKOTA: 10, 11
19 only	OHIO: 10, 15, 17
FLORIDA: 10, 11, 15	OKLAHOMA: 15, 20, 21
GEORGIA: 10, 11, 15	OREGON: 10, 11, 17, 21
IDAHO: 10, 11, 17, 20	PENNSYLVANIA: 5, 15
HAWAII: 10, 11	RHODE ISLAND: 10
ILLINOIS: 10, 21	SOUTH CAROLINA: 10, 11
IOWA: 10, 13	SOUTH DAKOTA: 19 only
INDIANA: 10, 11, 12	TENNESSEE: 10, 11
KANSAS: 3, 5, 7, 20, 21	TEXAS: 10, 11, 15, 17, 21
KENTUCKY: 10, 12	UTAH: 10, 17, 21
LOUISIANA: 10, 11	VERMONT: 10
MAINE: 10	VIRGINIA: 10, 11, 12
MARYLAND: 10	WASHINGTON: 2, 3, 10, 14, 17
MASSACHUSETTS: 10	WEST VIRGINIA: 10
MICHIGAN: 10	WISCONSIN: 10, 11
MINNESOTA: 10	WYOMING: 20, 21
MISSISSIPPI: 10, 11	
MISSOURI: 10, 11, 14, 15, 21	

Model AN-1 ANTENNA is an ideal antenna for listeners who are not able to use longwire antenna. It's characteristics are: 1) Signal to noise ratio and interference prevention feature are superb. 2) Wide reception coverage from LW~SW gives to listeners opportunity. 3) It is compact and easy to put-up and also. The antenna module is made completely water-free.



Examples of use :



※ Please use coupler in accordance with the type of reception band and receiver.
Please note that ANC-1 and ANC-2 can not be used simultaneously.

■ SONY WORLD BAND RADIOS



FM LW MW SW PLL SYNTHESIZED RECEIVER

ICF-2002

Frequency range:

FM 76.0 to 108.0MHz

MW 520 to 1610kHz

SW 1615 to 29995 kHz

LW 153 to 519 kHz

Dimensions:

Approx. 184.5 × 118.5 × 32mm (w/h/d)
(7³/₈ × 4³/₄ × 2¹/₄ inches)

including projecting parts and controls

FM SW MW 5 BAND RECEIVER

ICF-6500W

Frequency range:

FM 87.5-108MHz

SW₁ 3.9-10MHz(77-30m)

SW₂ 11.7-20MHz(25.6-15m)

SW₃ 20-28MHz(15-10.7m)

MW 530-1,605kHz(566-187m)

Dimensions:

Approx. 289 × 168.5 × 102mm(w/h/d)
(11¹/₂ × 6¹/₄ × 4¹/₈ inches)

incl. projecting parts and controls



MW SW 6 BAND RECEIVER

ICR-4800

Frequency range:

SW₁ 5.95-6.20MHz(49m)

SW₂ 9.45-9.85MHz(31m)

SW₃ 11.70-12.00MHz(25m)

SW₄ 15.10-15.50MHz(19m)

SW₅ 17.60-18.00MHz(16m)

MW 530-1,605kHz(566-187m)

Dimensions:

Approx. 133.5 × 74 × 22mm(w/h/d)
(5¹/₄ × 2⁹/₁₆ × 1 inches)

not incl. projecting parts and controls



■ ASSOCIATION OF NORTH AMERICAN RADIO CLUBS LIST

AMERICAN SHORTWAVE LISTENERS CLUB (ASWLC) Founded 1964

Address: 16182 Ballard Lane, Huntington Beach, CA 92649

Coverage: SW, utilities, MW, QSL, time index, beginner features

Publication: "SWL" monthly; offset printing

Sample: North America \$1.00; overseas \$2.00 or 8 IRCs

Dues: USA, Canada, Mexico \$15.00 in U.S. funds; overseas seamount \$16.00; airmail to Central America & Caribbean \$18.00; airmail to Europe & South America \$21.00; airmail to Asia/Oceania/Africa/Mideast \$25.00

CANADIAN INTERNATIONAL DX CLUB (CIDX) Founded 1962

Address: 6815 12th Avenue, Edmonton, Alberta T6K 3J6

Coverage: All wave, including SW, MW, utility, ham, clandestine

Publication: "CIDX Messenger" monthly; mimeograph printing

Sample: North America 50¢; overseas \$1.00

Dues: North America \$13.00; overseas write HQ for rates

CANADIAN SWL INTERNATIONAL (CSWLI) Founded 1977

Address: P.O. Box 142, Thunder Bay, Ontario P7C 4V5

Coverage: SW, utilities, QSL

Publication: "CANDX" monthly; mimeograph printing

Sample: North America \$1.00; overseas 5 IRCs

Dues: North America \$12.00; overseas write HQ for rates

CLUB ONDES COURTES DU QUEBEC (COCQ) Founded 1974

Address: Case Postale 267, Gaspé, Quebec G0C 1R0

Coverage: SW, MW, utilities, ham

Publication: "L'Onde" monthly; offset printing (in French/en français)

Sample: North America \$1.50; overseas 5 IRCs

Dues: North America \$17.00; overseas \$21.00

INTERNATIONAL RADIO CLUB OF AMERICA (IRCA) Founded 1964

Address: P.O. Box 26254, San Francisco, CA 94126

Coverage: MW

Publication: "DX Monitor" 34 issues annually; offset printing

Sample: North America 50¢; overseas 3 IRCs

Dues: North America \$16.50; overseas write HQ for rates

LONGWAVE CLUB OF AMERICA (LWCA) Founded 1974

Address: P.O. Box 33188, Granada Hills, CA 91344

Coverage: Longwave (below 550 kHz, plus the 1750-meter band)

Publication: "The Lowdown" monthly; mimeograph printing

Sample: North America 85¢; overseas 5 IRCs

Dues: North America \$10.00, overseas \$18.00

NATIONAL RADIO CLUB (NRC) Founded 1933

Address: P.O. Box 118, Poquohock, CT 06064

Coverage: MW

Publication: "DX News" 30 issues annually; offset printing

Sample: North America 60¢; overseas 3 IRCs

Dues: USA and Canada \$18.00; Mexico & Caribbean \$25.00; elsewhere \$30.00

NORTH AMERICAN SHORTWAVE ASSOCIATION (NASWA) Founded 1961

Address: P.O. Box 13, Liberty, IN 47353

Coverage: SW

Publication: "FRENDEX" monthly; offset printing

Sample: North America \$1.00; overseas \$2.00 or 10 IRCs

Dues: North America \$14.00; Europe & Latin America \$25.00; Africa/Asia/Pacific \$28.00. Worldwide by surface mail \$16.00

ONTARIO DX ASSOCIATION (ODXA) Founded 1974

Address: 3 Camrose Crescent, Scarborough, Ontario M1L 2B5

Coverage: SW, MW

Publication: "DX Ontario" monthly; offset printing

Sample: \$1.00 worldwide

Dues: Canada \$12.00; USA \$15.00, overseas \$20.00

RADIO COMMUNICATIONS MONITORING ASSOCIATION (RCMA) Founded 1975

Address: P.O. Box 4563, Anaheim, CA 92803

Coverage: VHF/UHF public service bands, SW utilities

Publication: "RCMA Newsletter" monthly; offset printing

Sample: North America \$1.00; overseas 6 IRCs

Dues: USA \$12.00; Canada & Mexico \$13.50; Europe \$14.50; Asia/Pac \$15.00

SPEEDX (Society to Preserve the Engraving Enjoyment of DXing) Founded '71

Address: P.O. Box E, Elsinore, CA 92530

Coverage: SW, utilities, QSL

Publication: "SPEEDX" monthly; offset printing

Sample: North America \$1.00; overseas \$2.00 or 8 IRCs

Dues: North America \$16.00, Caribbean & Central America \$24.00; Europe & South America \$28.00; Asia/Pac/Africa \$31.00 Worldwide surface \$17

WORLDWIDE TV-FM DX ASSOCIATION (WTFDA) Founded 1967

Address: P.O. Box 97, Calumet City, IL 60409

Coverage: TV, FM

Publication: "VHF-UHF Digest" monthly; offset printing
Sample: North America \$1.00; overseas 6 IRCs
Dues: North America \$13.00; overseas \$18.00

ANARC ASSOCIATE MEMBER CLUBS CLUB DX QUEBECOIS (CDXQ) Founded 1977

Address: 12073 Poincare, Montreal, Quebec H3L 3M1

Coverage: SW, MW, utilities

Activities: Membership limited to residents of Montreal area. No regular publications, but meetings are held regularly. Write HQ for meeting dates, details.

HANDICAPPED AID PROGRAM (HAP) Founded 1972

Address: Canadian Branch — 6 Coolbreeze Ave., Pt. Claire, Quebec H9S 5G4 U.S. Branch — 3831 Hendricks Place, Gary, IN 46408

Coverage: The purpose of HAP is to introduce DX listening to the disabled and to aid handicapped persons already in the hobby. Handi-capped persons are invited to inquire about HAP membership.

Publication: "HAP Report" is a monthly supplement included within the ANARC Newsletter

MINNESOTA DX CLUB (MDXC) Founded 1973

Address: 5212 Drew Avenue South, Minneapolis, MN 55410

Coverage: SW, MW, utilities

Activities: Membership limited to residents of Minnesota. No regular publications, but meetings are held regularly in Minneapolis area. Send SASE for meeting dates, details.

SAN DIEGO DXERS CLUB (SDDXC) Founded 1978

Address: 1826 Cypress Street, San Diego, CA 92154

Coverage: Non-technical receiver and equipment evaluations only, relating to SW, MW, longwave utility, TV, FM equipment

Publication: "San Diego DXers Club" monthly; offset printing

Sample: North America 75¢; overseas 5 IRCs

Dues: North America \$9.00; overseas \$14.00

UNIVERSITY OF MANITOBA DX CLUB (UMDXC) Founded 1972

Address: c/o Aaron Hywarren, 217 Dalhousie Dr., Richmond, Fort, Winnipeg, Manitoba R3T 2Y9

Coverage: SW, MW

Activities: Membership limited to residents of the Winnipeg area. No regular bulletins, but meetings are held regularly at the University of Manitoba. Send SASE for meeting dates, details.

WASHINGTON AREA DX ASSOCIATION (WADXA) Founded 1978

Address: 606 Forest Glen Road, Silver Spring, MD 20901

Coverage: SW, MW, utility

Publication: "WADXA Newsletter" quarterly

Dues: \$3.00 in North America; meetings held quarterly in Washington, D.C.

- Information printed in this WAVE HANDBOOK is that of March 1984 to date.

WAVE HANDBOOK

Edited and published by
SONY CORPORATION RADIO DIVISION.

7-35, Kitashinagawa 6-chome
Shinagawa-ku, Tokyo 141, Japan

Printed in March 1984

SONY

Video Sketch Titler

XV-T33

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.



Edit Studio

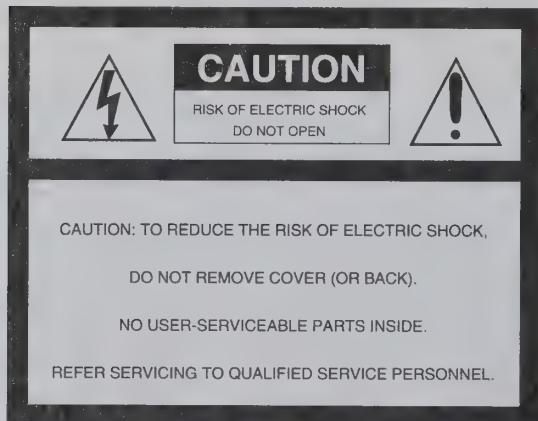
Owner's Record

The model and serial numbers are located at the rear of the unit. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. XV-T33 Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the equipment with respect to the receiver
- Move the equipment away from the receiver
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

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Precautions

On Safety

- Operate the unit on 120 V AC, 60 Hz.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. Never pull the cord itself.
- When lightning occurs, unplug the power cord from the wall outlet immediately.
- Do not remove the cabinet as you may get an electric shock if you touch inside the cabinet.
- Do not spill any liquid inside the cabinet. Do not drop inflammable or metallic material on the unit. Fire, electric shock, or malfunction may result.
- Do not place heavy material on the unit.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

On Installation

- Do not install the unit near a heat source such as a radiator or an air duct, near a MW radio or tuner (noise may occur) or in a place subject to direct sunlight, excessive dust, humidity, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Never operate the unit in a vertical position.

On Cleaning

Clean the cabinet with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine, that may damage the finish.

On the Pad

- Use the supplied drawing pen with the pad.
- Do not forcefully strike the pad or press hard against it with the pen.
- Do not scrape the pad fast as the drawn line may be broken.
- Do not forcefully press against the pad with your hand as the position of the pen may slip.

If you have any questions about this unit, contact your Sony dealer.

How to Use This Manual

This manual is intended for users of the XV-T33 Video Sketch Titler. It explains how to operate the video sketch titler, including a quick start section for new users.

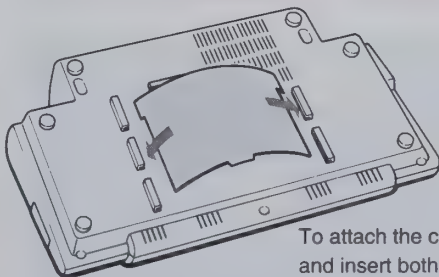
This manual is divided into the following sections:

- Introduction** — This section describes the overview, precautions, and identifies the parts and functions of the video sketch titler.
- Preparation** — This section describes the connection of video equipment and information you should know before you start operating the video sketch titler.
- Quick start** — This section lets you quickly get started using the video sketch titler for the first time. The Quick Start section explains how to create and superimpose a simple title. Read this section if you want to start using the titler right away.
- Basic operations** — This section describes the general operations of the video sketch titler.
- Advanced operations** — This section describes the advanced operations of the video sketch titler.
- Additional Information** — This section provides specifications, troubleshooting tips, and supplemental information such as sample fonts and titles.

Using the Quick Reference Card

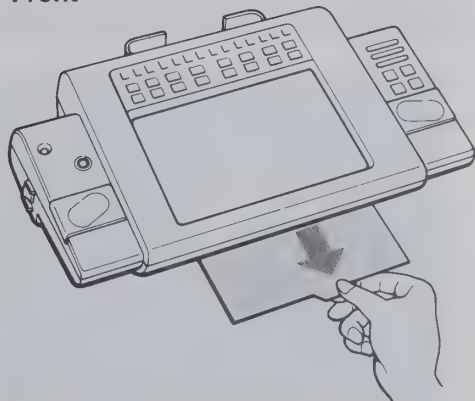
The Quick Reference Card provides abbreviated instructions for using the video sketch titler. Before using the card, remove the seal from it. Attach the card to the bottom of the titler, and pull the card out to refer to it whenever necessary.

Bottom



To attach the card, bend it and insert both ends into the slots.

Front



Overview

Using the video camera recorder is always enjoyable when you travel or want to record a special event. But when you later watch the videotape you have recorded, do you feel something is missing from the picture? The Video Sketch Titler (the titler) helps you make your videotape more fun and memorable by creating and adding titles onto your videotape.

The titler allows you to do the following procedures easily with an on-screen menu:

- create a title using three types and two sizes of font
- create a title by freehand writing and drawing
- create a title and an illustration using sample titles and illustrations
- scroll in and out a title in four different ways
- superimpose a title on the video picture
- create a title for two screens simultaneously

Without titles

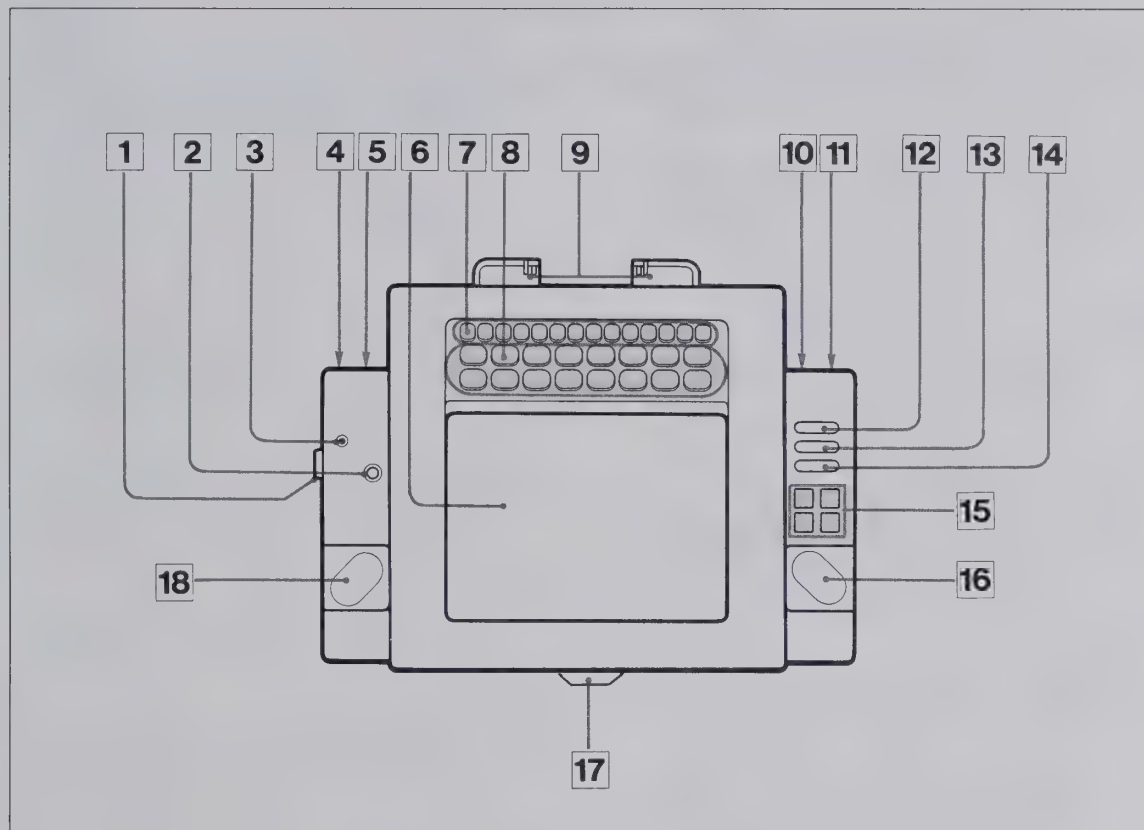




With titles



Identifying the Parts

Familiarize yourself with the parts of the titler before you start the operations.



- | | |
|---|---|
| <p>1 Power switch
Switch on to turn on the power.</p> <p>2 CLEAR button
Press to clear the screen.</p> <p>3 POWER indicator
Lights up when the power goes on.</p> <p>4 S VIDEO input jack
Use this jack to connect to the S video output jack of the player.</p> <p>5 VIDEO input jack
Use this jack to connect to the video output jack of the player.</p> <p>6 Pad
Use this pad to draw titles on using the supplied pen.</p> | <p>7 Color select keys
Select the color of the title.  chooses the rainbow color (see "Rainbow Colors" on page 36).  chooses transparent.</p> <p>8 Drawing keys
Select various ways to create a title. See "Function of the Drawing Keys" on page 9 for details.</p> <p>9 Pen holder
Lay the supplied pen on this holder.</p> <p>10 S VIDEO output jack
Use this jack to connect to the S video input jack of the recorder.</p> |
|---|---|

11 VIDEO output jack

Use this jack to connect to the video input jack of the recorder.

12 SUPERIMPOSE button and indicator

You can superimpose titles on the video picture when the indicator lights up. Each time you press this button, the indicator lights up and goes out alternately.

Indicator	What you see on the screen
On	The title on the video picture
Off	The title only

13 1 PAGE 2 button and indicators

The video sketch titler has two screens to create and scroll titles with. These screens are called PAGE 1 and PAGE 2. Select the screen you want to work on. Each time you press this button, the indicators of PAGE 1 and PAGE 2 light up alternately.

Indicator	You are working on
PAGE 1 is on	The title on page 1
PAGE 2 is on	The title on page 2

14 DRAW STANDBY button and indicators

Select the mode for creating and scrolling the titles.

Each time you press this button, the DRAW and STANDBY indicators light up alternately.





Indicator	You are
DRAW is on	Creating the title
STANDBY is on	Ready to scroll the title

15 WIPE PATTERN buttons and indicators

Select how to scroll the title.

When you press the button, the indicator lights up.

The following table shows the function of each button.

Button	How the title scrolls
	Appears and disappears instantly
	Scrolls from the bottom upwards
	Scrolls from the top downwards
	Appears from the center and scrolls outwards or disappears as it goes from the title edge to the center

16 DRAW/WIPE OUT button

Press when creating the title. Also, press to make the title disappear.

17 Quick reference card

















Use the card to conveniently refer to the use of the titler.

18 DRAW/WIPE IN button

Press when creating a title. Also, press to scroll in the title.

Function of the Drawing Keys

The following table shows the function of the drawing keys.

Drawing key	Function	Reference page
	Draw a square.	25
	Draw a circle.	25
	Draw a caption.	25
	Draw a wooden board.	25
	Draw a wooden line.	25
	Select a letter.	15, 23
	Select a sample title and illustration.	24
	Erase a title and illustration.	29
	Draw a thin curved line.	24
	Draw a thick curved line.	24
	Draw an outlined curved line.	24
	Draw a checkered curved line.	24
	Draw an outlined straight line.	25
	Paint a title and illustration.	27
	Copy a title and illustration.	28
	Undo a previous action.	29

Connecting Video Equipment

Connect the titler to video equipment before you start using the titler. This section explains two ways to connect video equipment, basic connection and connection using the S video jacks.

Video Equipment Used with the Titler

When using the titler, you need the following video equipment for connection:

- a TV or a monitor for creating titles and viewing the video picture
- a VCR or a video camera recorder for playing the original videotapes (player)
- a VCR for recording the titles and original tapes combined (recorder)

Note on Connection

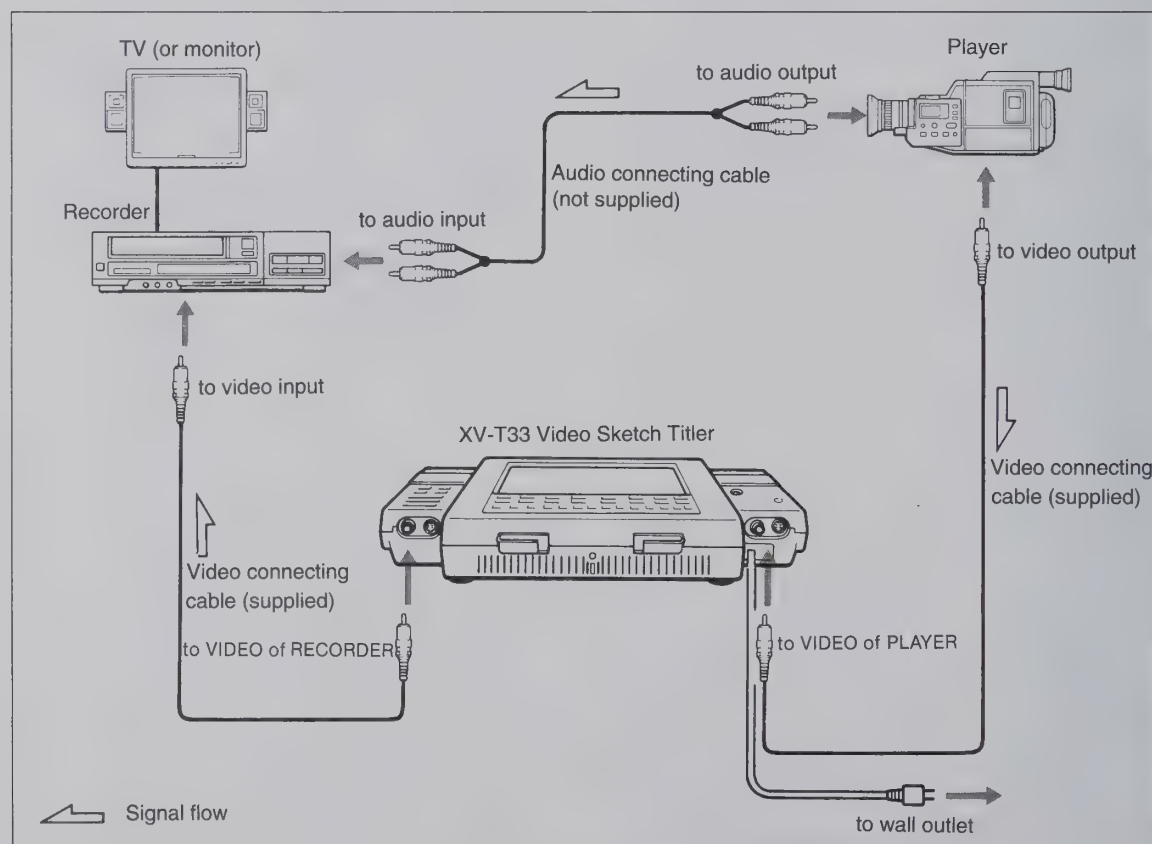
Be sure to turn off the power of the titler and video equipment before connection.

About the player and the recorder

- Connect the red plug to the audio right jack (red) and the white plug to the audio left jack (white).
- Connect the yellow plug to the video jack (yellow).
- When the player or the recorder is a monaural type, use a monaural A/V connecting cable such as VMC-910MS/920MS (phono plug X 2 - phono plug X 3) (not supplied).
- When both the player and the recorder have the S video jacks, we recommend you to use the S video jacks with optional cables such as YC-15V/30V/15EV/30EV.

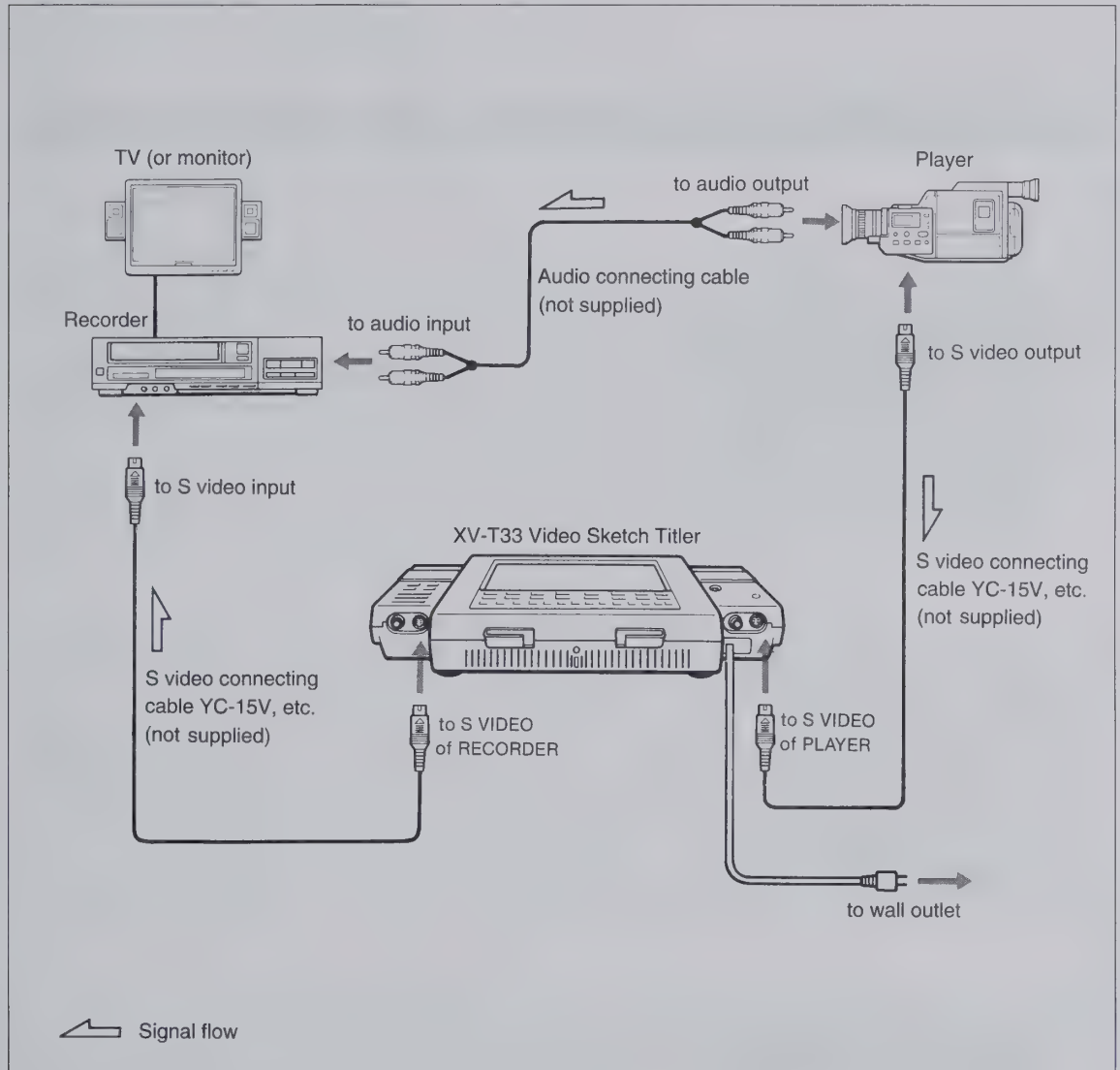
Basic Connection

The following illustration shows the connection of the titler with the video equipment.



Connection Using the S Video Jacks

The following illustration shows the connection of the titler with video equipment that has the S video jacks.



When using the S video jacks

When you use either the video input jack or the S video input jack to input the signal from the player, the signal is output from both the video output jack and the S video output jack. But to get a clearer picture from the player, we recommend you to use

the S video jacks of the player and the recorder when using the S video jacks of the titler, or use the video jacks of the player and the recorder when using the video jacks of the titler.

Before You Begin

Before using the titler, check the connections and prepare the player and the recorder as follows:

Connection

Check that the player and the recorder are connected to the titler. If not, refer to page 10.

Player

- Insert the originally recorded tape.
- When the player has an input/output selector for the audio/video jacks, set it to ON (or output).
- Set the power switch to VTR (PLAYER) (or ON).

Recorder

- Insert a tape for recording. Check that the safety tab is not in the preventive position.
- Set the input selector to LINE IN.
- Make the necessary settings for recording such as recording mode, recording level, etc. See the operating instructions of the recorder for details.

Trying Out the Titler

To demonstrate the titler's most basic operations, this section shows how to create a simple title and add the title to a video picture. It is helpful for beginners who want to start using the titler right away. For details about the basic operations demonstrated in this section, see "Basic Operations" on page 20. More advanced operations are detailed in "Advanced Operations" on page 31.

The Procedure for Making a Video Picture with a Title

The procedure for making a video picture with a title is as follows:

1

Record a videotape with your video camera recorder (or other VCR).



2

Create a title for the video picture you have prepared using the titler.

CHAMPIONS

3

Add the title you have created onto the tape, and record the tape with the title onto a new tape or a tape you are editing.



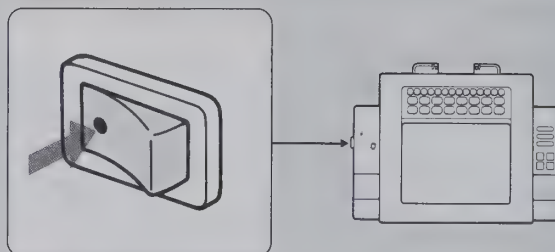
Getting Started

The titler provides a demonstration picture of sample titles when you turn on the power. This demonstration shows you what you can do with the titler.

1 Turn on the power of the video equipment.

2 Turn on the power of the titler.

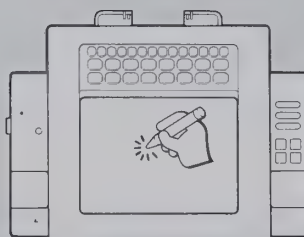
The demonstration appears on the screen.



SONY
Edit Studio
VIDEO SKETCH TITLER
XV-T88
© 1978, 1979 Sony Corporation
All Rights Reserved

3 When you finish looking at the demonstration or want to exit from it, touch the pad with the drawing pen.

The demonstration stops.
Now, you can start creating your own titles.



To stop using the titler

Turn off the power of the titler.

Note

Once you turn off the power, the title you have created is lost.

Creating a Title

Create a title using the letters of the alphabet.
For example, create the word "CHAMPIONS" in
the center of the screen as shown below.

CHAMPIONS

Before you begin

We use the following words in this manual:

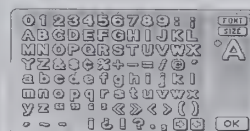
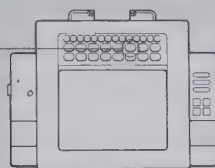
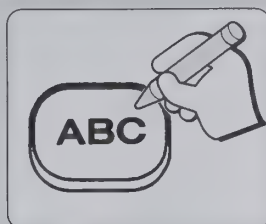
choose: Move the icon on the monitor by moving the pen on the pad, then
press either DRAW/WIPE IN or DRAW/WIPE OUT while the
icon is touching the item you want to choose.

move: Move the icon on the monitor by moving the pen on the pad.

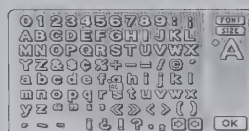
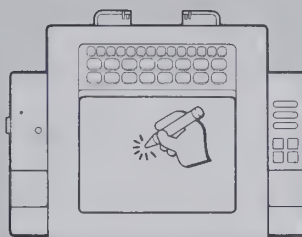
DRAW: The DRAW/WIPE IN button and the DRAW/WIPE OUT button are
called "DRAW."

- 1 Press **ABC** with the
pen.

The alphabet menu appears on
the screen.



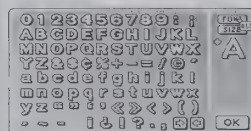
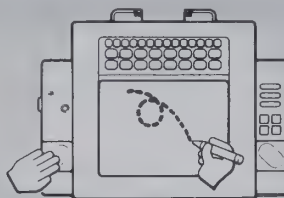
- 2 Press the pad with the
pen to display the icon
on the screen.



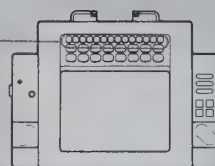
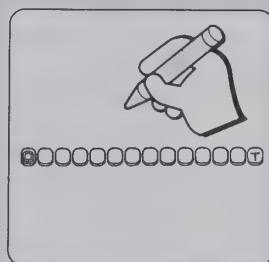
(continued)

3 To change the type or size of the font, choose **(FONT)** or **(SIZE)**.

There are three types of font. Each font has two sizes, large and small. Each time you choose **(FONT)** or **(SIZE)**, the type or size of a letter changes. You see it change by watching "A" on the right side of the menu.




4 Press one of the color select keys with the pen to select the color of the font.



5 Choose "CHAMPIONS" from the menu.


The letters you have selected appear on the bottom of the screen.

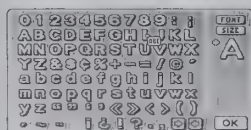
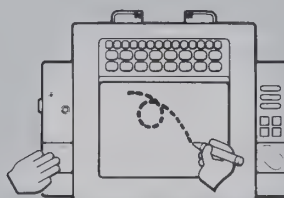
To correct a letter

Choose .

The very last letter on the bottom of the screen disappears. Select a correct letter.

To make a space between the letters

Choose .

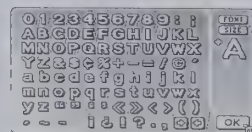
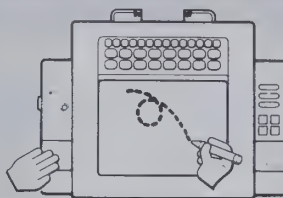


CHAMP -

(continued)

6 Choose **OK** when you finish selecting the letters.

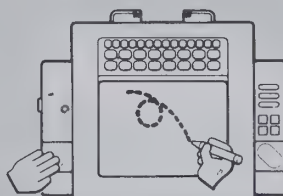
A select box indicating the bounds of the selected letters appears on the screen.



CHAMPIONS

7 Move the select box to the position where you want to add the letters on the video picture, then press **DRAW** while the box is holding the position.

The letters you have selected appear on the screen inside the select box.



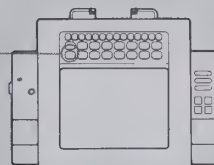
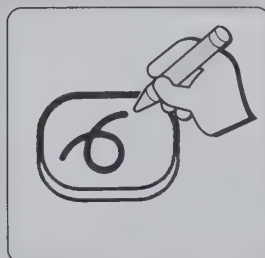
To change the position of the title

Move the select box to the new desired position, then press **DRAW**.

8 Press **6** with the pen.

The select box disappears from the screen.

Now you are ready to add the title onto the video picture.



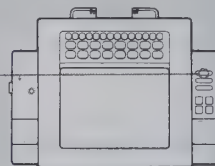
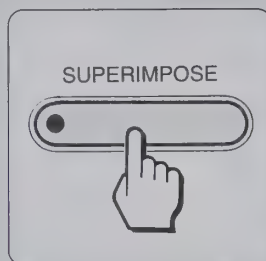
CHAMPIONS

Adding the Title onto the Video Picture

Add the title you have created onto the video picture. For example, add the title by scrolling (moving it) in from the bottom of the screen to the center, then make the title disappear (wipe out) by scrolling upwards off the screen.

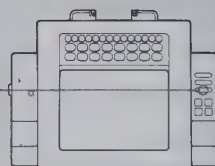
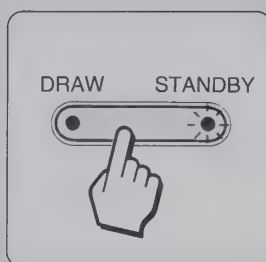


- 1** Press SUPERIMPOSE to turn on the indicator.




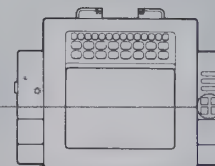
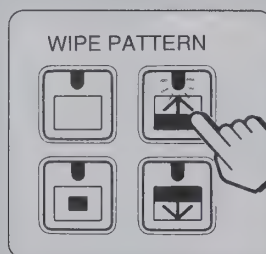
- 2** Press DRAW
STANDBY.

The STANDBY (right) indicator lights up.



- 3** Press one of the WIPE PATTERN buttons.

In this lesson, select  to scroll from the bottom upwards.



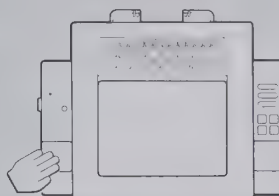
(continued)

- 4** Locate the start of the scene you want to make the title appear, and set the player to playback pause mode and the recorder to recording pause mode.



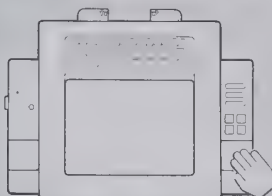
- 5** Start playback and recording, then press DRAW/WIPE IN.

The title scrolls in from the bottom to the center.



- 6** Press DRAW/WIPE OUT when the playback picture comes to the scene you want the title to disappear from.

The title scrolls upwards and out of the screen.



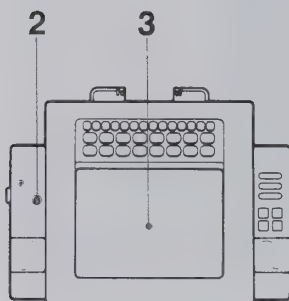
- 7** Stop the recorder and the player when you finish editing the tape.

You have finished using the titler to create and add a title. Now you can create any title you like and add it onto your videotape. If you want to know more about the use of the titler, go to the next section.

Working with the Titler

You can learn the basic use of the titler in the section “Trying Out the Titler.”

In this section, you find how to start and end the titler and how to use the screens.



Starting the Titler

- 1** Turn on the power of the video equipment.
- 2** Turn on the power of the titler.
- 3** Press the pad with the pen to stop the demonstration.

Notes

- When pressing buttons or keys on the titler, you can hear a small signal from the titler. To make the titler silent, turn on the power while pressing either *DRAW/WIPE IN* or *DRAW/WIPE OUT*.
- When the power of the titler is off, nothing appears on the screen even though the power of the player is on. To see the picture from the player, turn on the titler and press the pad with the pen.

Ending the Titler





Turn off the power of the titler.

Note

The titles you have created are lost once you turn off the power.

Adjusting the Screen Position

Press either DRAW/WIPE IN or DRAW/WIPE OUT and one of the following WIPE PATTERN buttons simultaneously.

To adjust the screen position	Press
to left	
to right	
to up	
to down	

Note

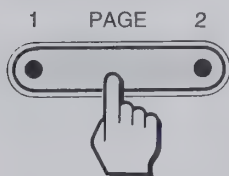
You cannot create a title in the upper and lower margins of the screen.

Using Two Screens

You can use two screens simultaneously to create titles.

To change the screen

Press 1 PAGE 2.



Each time you press 1 PAGE 2, the screen changes alternately.

You can learn the basics of title creation in the section "Trying Out the Titler."

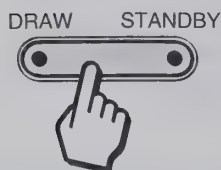
In this section, you find how to choose fonts, sample titles and illustrations, how to draw titles, how to paint titles in a color of your choice, how to set the background colors, and how to copy titles and illustrations.

When Creating a Title

When creating a title, make sure the DRAW (left) indicator of DRAW STANDBY is lit.

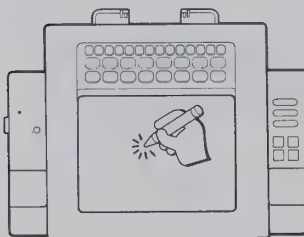
To light up DRAW

Press DRAW STANDBY.



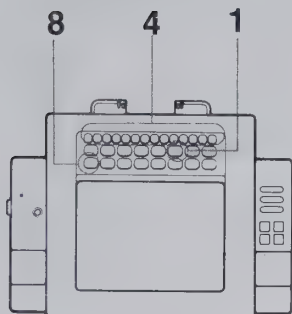
OR

Press the pad with the pen when watching the demonstration.



Choosing Fonts

You can choose from three types and two sizes of font as well as insert the Spanish accent (see page 37 for details). When choosing fonts, you can also choose colors.



- 1** Press **(ABC)** with the pen.
- 2** Move the icon to **(FONT)**, then press DRAW while the icon is touching **(FONT)**, to change the type of font.

To change the type of font again

Repeat Step 2.

- 3** Move the icon to **(SIZE)**, then press DRAW while the icon is touching **(SIZE)**, to change the size of the font.

To change the size of font again

Repeat Step 3.

- 4** Press one of the color select keys with the pen to select the color of the font.
- 5** Move the icon to one of the letter of the menu one by one, then press DRAW while the icon is touching the letter to select the letters.

To insert an accent mark

Select a letter, then select the accent mark for the letter.

The accent mark automatically comes with the letter.

Accent marks conform to Spanish usage only.

You can choose á, é, í, ó, ú, ñ, and ñ for the accent mark.

To correct a letter

Move the icon to **(←)**, then press DRAW while the icon is touching **(←)**.

The very last letter on the bottom of the screen disappears. Select a correct letter as in Step 5.

To make a space between the letters

Move the icon to **(→)**, then press DRAW while the icon is touching **(→)**.

- 6** Move the icon to **(OK)**, then press DRAW while the icon is touching **(OK)** when you finish selecting the letters.
- 7** Move the select box to the position where you want to add the letters onto the video picture, then press DRAW while the box is holding the position.

To change the position of the title

Repeat step 7.

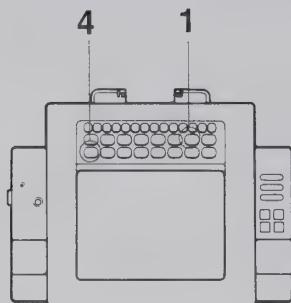
- 8** Press **(↺)** with the pen.

Note on an accent mark

An accent mark on the last letter of the line may not be inserted after you have chosen the letters for the whole line on the screen.

Choosing Sample Titles and Illustrations

The titler contains sample titles and illustrations. You can choose from 41 different kinds of sample titles and illustrations (see page 37 for details).



- 1 Press **MENU** with the pen.
- 2 Move the icon to the title or illustration, then press **DRAW** while the icon is touching the title or illustration.
- 3 Move the select box to the position where you want to add the title or illustrations onto the video picture, then press **DRAW** while the box is holding the position.

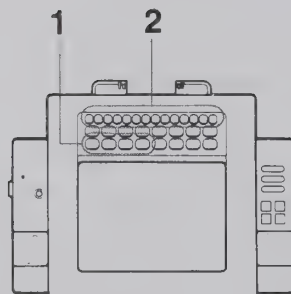
To change the position of the title or illustration
Repeat step 3.

- 4 Press **⌂** with the pen.

Drawing a Title

You can choose curved lines, straight lines, or figures to draw a title freehand. When choosing lines or figures, you can also choose colors. To draw a letter, use curved lines.

To draw a curved line



- 1 Press one of the following drawing keys with the pen.

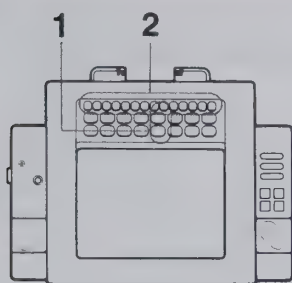
To draw	Press
a thin curve	⌂
a thick curve	⌂
an outlined curve	⌂
a checkered curve	⌂

- 2 Press one of the color select keys with the pen to select the color of the curve.
- 3 Draw a title by moving the icon while pressing **DRAW**.

Notes on an outlined curve

- An outlined curve is automatically cut when it is too long.
- The colors of the outline are as follows:

Color of curve	Color of outline
Black, transparent	White
Others	Black



To draw a straight line

- 1 Press one of the following drawing keys with the pen.

To draw	Press
an outlined line	
an wooden line	

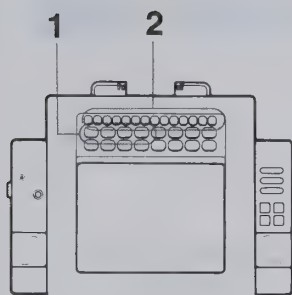
- 2 Press one of the color select keys with the pen to select the color of the line.

- 3 Draw a title by moving the icon while pressing DRAW.

Note on an outlined line

The colors of the outline are as follows:

Color of outlined line	Color of outline
Black, transparent	White
Others	Black



To draw a figure

- 1 Press one of the following drawing keys with the pen.

To use	Press
a square	
a circle	
a caption	
a wooden board	

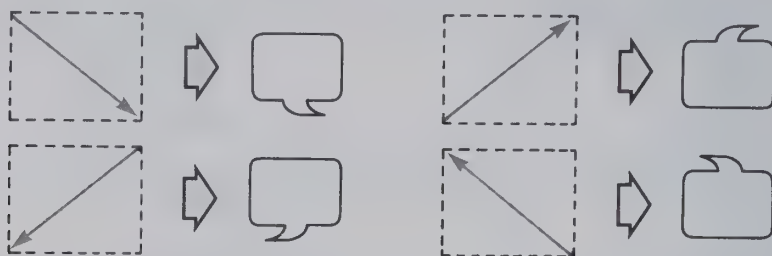
- 2 Press one of the color select keys with the pen to select the color of the figure.

- 3 Draw a line diagonally by moving the icon while pressing DRAW.

To draw	Draw
a square, wooden board	a diagonal line
a circle	the diagonal line of a square where a circle is to be inscribed
a caption	the diagonal line of a square where a caption is to be inscribed

Note on drawing a caption

The direction of the caption changes as you change the direction of the diagonal.



Note on an outline of a figure

The colors of the outline are as follows:

Color of figure	Color of outline
Black, transparent	White
Others	Black

Choosing Colors

When choosing fonts or drawing titles freehand, you can choose the color you want using the color select key.

(T) chooses transparent. (C) chooses the rainbow color (see also page 31 and 36 for details).

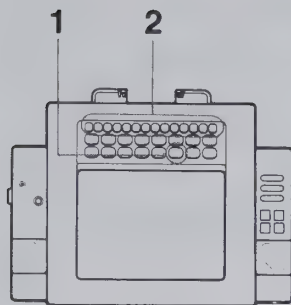
To choose color


After pressing the drawing key with the pen, press one of the color select keys with the pen.



Painting a Title

You can paint a title in any color you want using the color select keys.



- 1** Press  with the pen.
- 2** Press one of the color select keys with the pen.
- 3** Move the icon to the outlined portion where you want to paint, then press DRAW while the icon is touching the portion with its tip.

To change the color

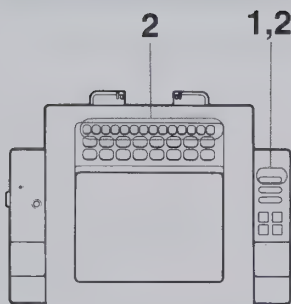
Repeat steps 1 to 3.

Setting the Background of the Title


You can choose a background color for the title. You can also set the video picture as the background for the title.

To choose the background color

- 1** Press SUPERIMPOSE to turn off the indicator.
- 2** Simultaneously press SUPERIMPOSE and one of the color select keys with the pen to select the background color.




To set the video picture as the background

Choose  when choosing the background color.

To remove the video picture from the background

Press SUPERIMPOSE to turn off the indicator.

To change the background color to the video picture

- 1** Press SUPERIMPOSE to turn off the indicator.
- 2** Simultaneously press SUPERIMPOSE and  with the pen.

To get the appropriate background

To be sure to get the background you have set, set SUPERIMPOSE and DRAW STANDBY as follows:

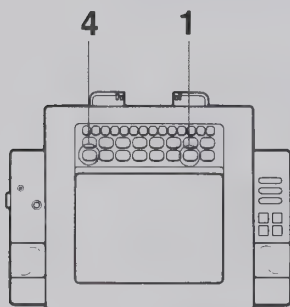
To get	Set
video picture background	SUPERIMPOSE to on and the color to transparent.
light gray background	SUPERIMPOSE to off and the color to transparent.
the color set for the background (not transparent)	SUPERIMPOSE to off. Or, set SUPERIMPOSE to on and DRAW STANDBY to STANDBY.

Notes

- *SUPERIMPOSE comes on and the background color is set to transparent when you turn on the titler.*
- *When the title appears on the screen or disappears from the screen, the background is set to the color of the present screen.*
- *When you select a different color for both screens, you can change the background color immediately after making the title appear on or disappear from the screen.*

Copying Titles and Illustrations

You can copy titles and illustrations on the same screen or to the other screen.



- 1 Press **COPY** with the pen.
- 2 Draw a line diagonally while pressing **DRAW** to enclose the title that you want to copy in a select box.
- 3 Move the select box to the position where you want to copy the title, then press **DRAW** while the box is holding the position.

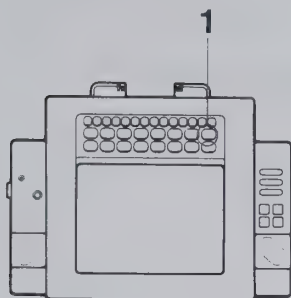
To copy the title to the other screen

- 1 Press 1 PAGE 2.
- 2 Repeat step 3.

To repeat coping the same title

Repeat step 3.

- 4 Press **↺** with the pen.



Erasing Titles and Illustrations

You can erase titles and illustrations like using an eraser or erase the whole screen at once.

- 1** Press **(ERASE)** with the pen.
- 2** Move the icon over what you want to erase while pressing **DRAW**.

To erase a small portion

- 1** Press **(○)** (a thin line) or **(⊖)** (a thick line), then **(T)** (transparent color) with the pen.
- 2** Move the icon over what you want to erase while pressing **DRAW**.

To erase the whole screen

Press **CLEAR**.

Undoing the Previous Action

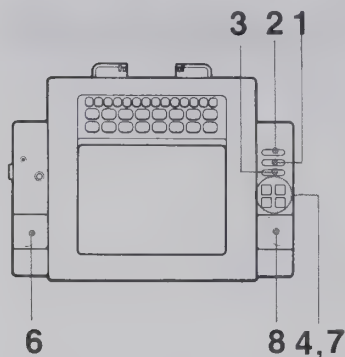
When you make a mistake while creating a title, you can undo the mistake. This is only good for the previous action.

To undo the previous action

Press **(UNDO)** with the pen.



Adding the Title onto the Video Picture



You can add the title onto the video picture after you have created it. When adding the title onto the video picture, you can choose from four different ways to make the title appear and disappear.

- 1** Press 1 PAGE 2 to select the screen that has a title you want to add onto the video picture.
- 2** Press SUPERIMPOSE to turn on the indicator.
- 3** Press DRAW STANDBY to turn on STANDBY (right).
- 4** Press one of the following WIPE PATTERN buttons to select how the title appears or scrolls in.

To make the title	Press
appear instantly	
scroll in from the bottom and scroll upwards	
scroll in from the top and scroll downwards	
appear from the center to outwards	

- 5** Locate the start of the scene where you want to add the title, and set the player to playback pause mode and the recorder to recording pause mode.
- 6** Start playback and recording when the tape comes to the scene where you want to make the title appear, then press DRAW/WIPE IN.
- 7** Press one of the WIPE PATTERN buttons to select how the title disappears from the screen.

To make the title	Press
disappear instantly	
scroll out upwards	
scroll out downwards	
disappear from the title edge to the center	


- 8** Press DRAW/WIPE OUT when the playback picture comes to the scene where you want to make the title disappear.
- 9** Stop the player and the recorder when you finish editing the tape.

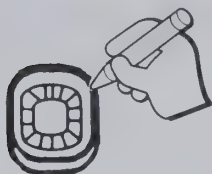
To repeat scrolling the title when or is selected
Keep DRAW/WIPE IN pressed in step 6.

Using the Rainbow Color

The rainbow color has twenty colors. See "Rainbow Colors" on page 36 for details. You can only select a single rainbow color for all the titles on the same screen or on the other screen.


To use the rainbow color

Press  with the pen when choosing the color.



Each time you press , the color changes.

To choose the previous color

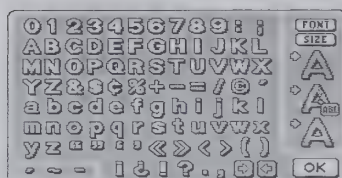
Simultaneously press  and either DRAW/WIPE IN or DRAW/WIPE OUT.

Creating a Title Using the Rainbow Color

Here are some of the effective ways to create titles using the rainbow color.

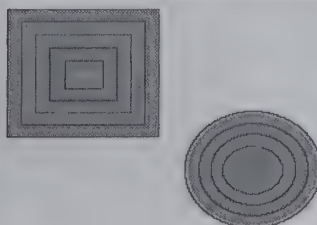
Choosing fonts

Refer to "Choosing Fonts" on page 23. You can choose from three types of the rainbow color. Select the type by moving the icon to one of three A's on the right side of the menu, then press DRAW while the icon is touching the A.



Drawing a figure

Refer to "To draw a figure" on page 25 and draw concentric squares or circles inwards. The rainbow color circulates inside the figure.



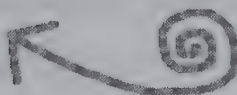
Drawing a frame

Refer to “To draw a figure” on page 25 and draw two concentric squares. Use a rainbow color for the outer square and the transparent color for the inner square. The rainbow color circulates inside the frame.



Drawing a streaming line

Refer to “To draw a curved line” on page 24 or “To draw a straight line” on page 25 and draw a line freehand. The rainbow color flows in the direction of the line.

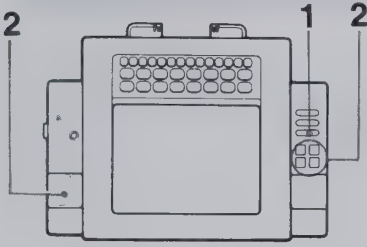


Drawing dots

Refer to “To draw a curved line” on page 24 and draw dots. The dots speckle the rainbow color.



Choosing a Wipe Pattern



To help you choose a wipe pattern, you can perform each wipe pattern on titles automatically. The titles are wiped in and out in all the available ways for both screens.

- 1** Press DRAW STANDBY to turn on STANDBY (right).
- 2** Press all the WIPE PATTERN buttons and DRAW/WIPE IN simultaneously.

To stop the title scroll
Press the pad with the pen.

Connectors

Video input	Phono jack (1) Input signal: 1 Vp-p, 75 ohms unbalanced, sync negative
S video input	4-pin mini DIN connector (1) Luminance signal: 1 Vp-p, 75 ohms unbalanced, sync negative Chrominance signal: 0.286 Vp-p, 75 ohms unbalanced
Video output	Phono jack (1) Output signal: 1 Vp-p, 75 ohms unbalanced, sync negative
S video output	4-pin mini DIN connector (1) Luminance signal: 1 Vp-p, 75 ohms unbalanced, sync negative Chrominance signal: 0.286 Vp-p, 75 ohms unbalanced

General

Power requirements	120 V AC, 60 Hz
Power consumption	10 W
Operating temperature	0°C to 40°C (32°F to 104°F)
Operating humidity	20 % to 80 %
Dimensions	Approx. 360 × 73 × 257 mm (w/h/d) (14 1/4 × 2 7/8 × 10 1/8 inches)
Weight	Approx. 1.7 kg (3 lb 12 oz)
Supplied accessories	Video connecting cable (2) Drawing pen (1) Quick Reference Card (1) Operating Instructions (1)

Design and specifications are subject to change without notice.


Refer to the following table if you have problems with your titler. If problems continue, consult your nearest Sony dealer.

Trouble	Cause/Solution
The power does not turn on.	The power cord is not connected to the AC outlet.
The demonstration picture does not appear on the screen though the power is on.	<ul style="list-style-type: none"> • The titler and the video equipment are not connected correctly. Refer to "Connecting Video Equipment" on page 10. • The input selector on the recorder is not set to LINE IN. • The input selector on the TV (or the monitor) is not set correctly.
The title on the screen is not clear.	When you set the player to play pause mode or special playback mode, the title on the screen may be distorted.
The title on the screen is not visible.	You cannot create a title in the upper and lower margins of the screen. This is not a malfunction.
The video picture is not visible.	<ul style="list-style-type: none"> • The background of the title is not set correctly. Refer to "Setting the Background of the Title" on page 27. • The player is not playing the tape. • The titler and the video equipment are not connected correctly. Refer to "Connecting Video Equipment" on page 10.
A title cannot be superimposed on the video picture.	The background of the title is not set correctly. Refer to "Setting the Background of the Title" on page 27.
The color of the title does not appear properly.	<ul style="list-style-type: none"> • A black-and-white video camera is being used for the player. Do not use a black-and-white video camera. • If you are using a TV for the input video picture, the TV has not been tuned in accurately.


Colors, Titles, and Illustrations Used with the Titler

This section shows what colors you can choose as the rainbow color, which fonts, titles, and illustrations you can choose to create titles and illustrations.

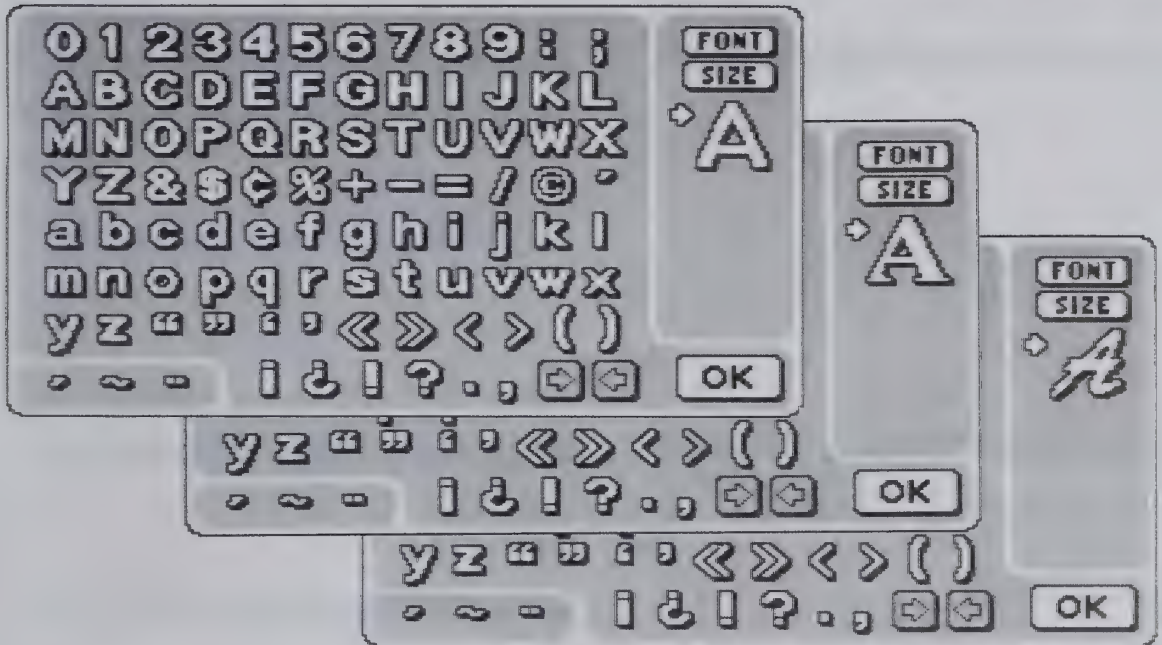
Rainbow Colors

The rainbow color has twenty colors. Each time you press , the rainbow color changes as follows:



*To choose the previous color
Simultaneously press  and
either DRAW/WIPE IN or DRAW/
WIPE OUT.*

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- wooden line 9, 25

SONY®

3-750-680-21 (2)

Video Cassette Recorder

SLV-353UC

Operating Instructions



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna

Relocate the equipment with respect to the receiver

Move the equipment away from the receiver

Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems".

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specified that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Owner's Record

The model number is located at the rear and front of the unit and the serial number on the top. Record the serial number in the space provided on the right. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. SLV-353UC

Serial No.

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On Safety

- Operate the unit only on 120V AC, 60 Hz.
- Should anything fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Unplug the unit from the wall outlet if it will not be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

On Installation

- Allow adequate air circulation to prevent internal heat build-up.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, such as microwave ovens or large loud speakers.
- Do not place any heavy object on the unit.

On Operation

- When the unit is not in use, turn the power off to conserve energy and to extend the life of the unit.
- Remove and store video cassettes after recording or playback.
- Store the cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.

On Cleaning

- Clean the cabinet, panel and controls with a dry, soft cloth, or a soft cloth slightly moistened with a mild detergent solution.
- Do not use any type of solvent, such as alcohol or benzine, which might damage the finish.

On Repacking

- Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

If you have any questions about this unit, contact your Sony dealer or a qualified technician.

How to Use This Manual

This manual is arranged to help you quickly find the information you need for the operation of the SLV-353UC. This manual consists of the following four sections.

- 1** Preliminaries
- 2** Preparation
- 3** Operation
- 4** Other Information

First, look through the Table of Contents. If you are already familiar with VCR operation, read starting from the "Preparation" section. If you are new to VCR operation, start with "Identifying the Operational Parts" to familiarize yourself with this unit. To have a quick overview of the operation of this unit, refer to "Playing a Tape" (page 28), "Recording TV Programs" (page 34), and "Timer Recording" (page 38).

Before You Begin

- Check that the following accessories are in the carton with your unit:
 - Remote Commander RMT-V353 (1)
 - Size AA (R6) batteries (2)
 - External antenna connector (1)
 - 75-ohm coaxial cable with F-type connectors (1)
 - AC power cord (1)
- In the text of this manual, buttons and switches are shown in capital letters:
Press **PLAY**.
- The buttons on the Commander and the unit with the same mark have the same functions.
- Notes are enclosed in boxes.

Overview of the SLV-353UC

For editing

- **SWING SHUTTLE dial**

Allows quick access to the desired scene.

- **Control S INPUT jack**

Allows remote control of this VCR by other Sony video equipment with a control S output jack.

- **Input connectors on the front panel**

Offers easy connection to a video camera recorder.

On-screen displays

- **Data screen**

Tape counter, tape speed, operation mode, and remaining tape length are displayed on the screen.

- **AUTO MENU display**

Allows selection of an automatic tape operation on the TV screen.

- **Timer title**

Date, time, and channel of the recorded program can be inserted just before a timer recording.

- **TIMER SET/CHECK display**

Timer recording settings can be set and checked by referring to the TV screen.

Convenient Functions

- **Auto tracking function**

Automatically adjusts the picture for a clear picture.

- **Timer recordings of 8 programs over a month**

Recording of up to eight TV programs can be preset as much as one month in advance.

- **Index function**

The beginning of a desired scene can be located easily with the index scan/index search function.

High Quality picture

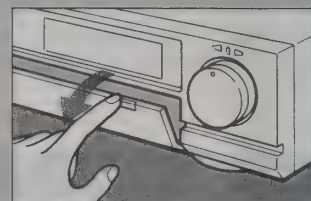
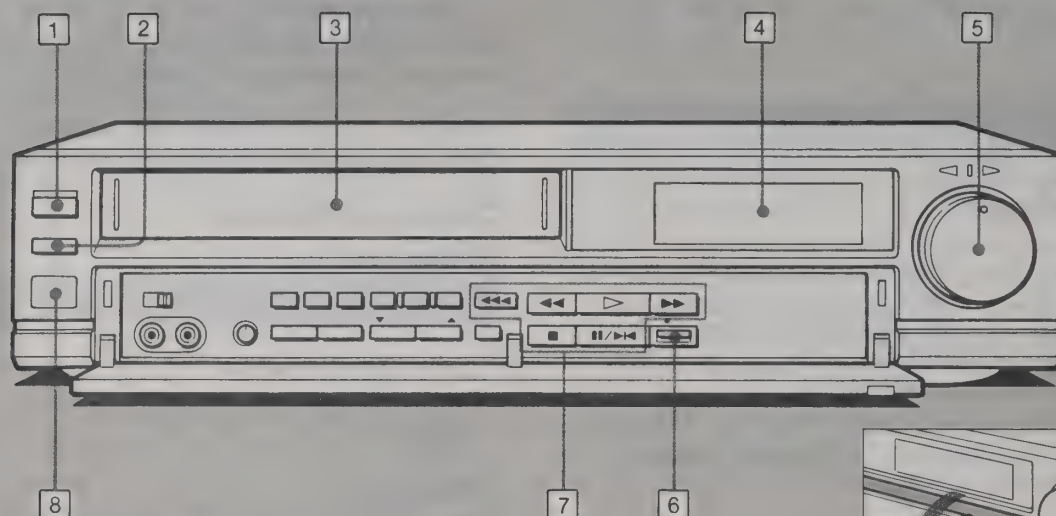
- **High quality (HQ) picture**

The SLV-353UC provides sharp, finely detailed pictures through High Quality (HQ) picture technology.

HQ A video cassette recorder (VCR) with this marking incorporates VHS high-quality picture technology and is compatible with any video cassette recorder bearing the **VHS** mark.

Identifying the Operational Parts

Front



1 POWER switch and indicator

Press to turn on and off the power of the unit. The indicator lights when power is supplied.

2 EJECT button

Press to eject a cassette.

3 Cassette compartment

Insert a cassette.

4 Display window and function mode display

Various displays appear. See "Indications in the Display Window" (page 55).

5 SWING SHUTTLE (FORWARD/REVERSE) dial and indicator

Turn to the right to advance and to the left to reverse the picture in various speeds including a still picture when the dial is released.

6 REC button

Press to start recording.

7 Tape transport buttons

◀◀ REW (rewind)

▷ PLAY

▶▶ FF (fast-forward)

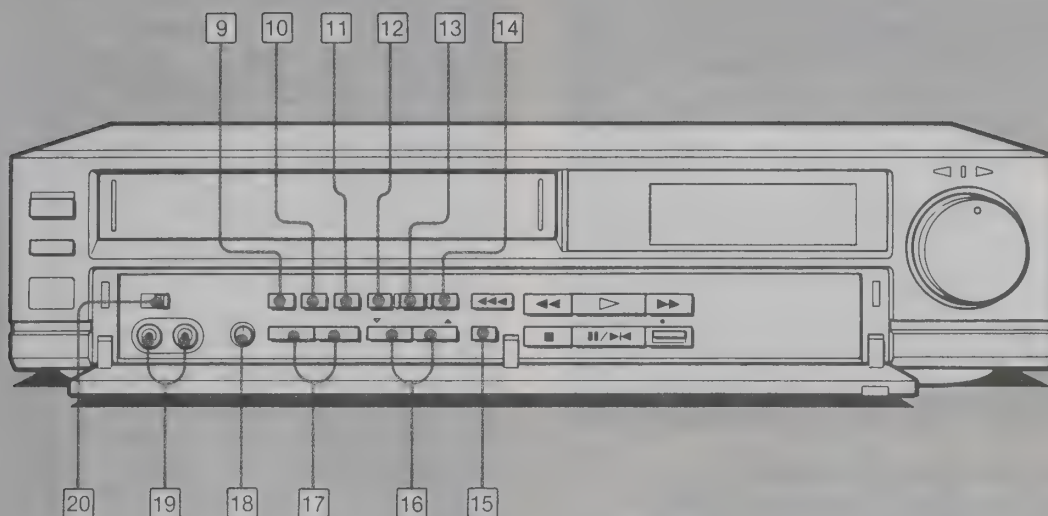
■ STOP

■/■ PAUSE/STILL

◀◀ HIGH SPEED REWIND

8 Remote sensor

Point the supplied Commander here.

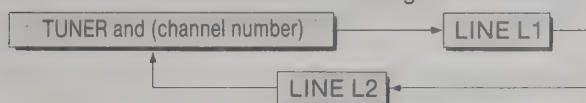


9 ANT TV/VTR button

When connecting the VCR and a TV via the VHF antenna terminal, press this button so that VTR indicator lights in the display window. When you wish to watch TV programs while the VCR is in use, press it again so that the VTR indicator is turned off.

10 INPUT SELECT button

Press so that the desired input mode indicator appears in the display window to select the program to be recorded. The indicator changes as follows:



11 REC MODE (SP/EP) button

Press to select the recording tape speed, SP or EP. When playing back, the tape speed will be automatically detected regardless of the setting of this button.

12 EDIT ON/OFF button

Normally keep this button at OFF (i.e. the EDIT indicator turned off). When using this VCR for editing, press this button so that the EDIT indicator lights.

13 TIMER REC ON/OFF button

Press this button to enter the timer recording standby mode. Press is again to release the timer recording standby mode before changing or canceling a timer recording or to operate the unit before a timer recording starts.

14 QUICK TIMER button

Press to start quick timer recording and to set the recording duration.

15 TRACKING AUTO/MANUAL button

Press to re-activate the automatic tracking function after manual tracking adjustment.

16 TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲ buttons

Press to clear possible streaks on the screen or to reduce picture shaking that may appear when playing tapes recorded on other VCRs. Also press when the picture should shake vertically in the still mode.

17 CHANNEL +/- buttons

Press to select the TV channels. Press + to advance and - to reverse.

18 SHARPNESS SOFT/SHARP control

Use to adjust the sharpness of the picture if necessary. Normally set this control at the indented center position.

19 LINE IN 2 VIDEO/AUDIO jacks (phono type)

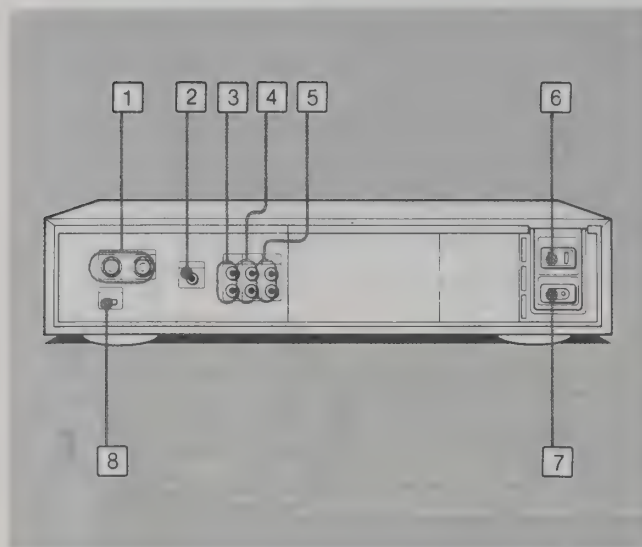
Connect to the video/audio output jack of another VCR or a video camera recorder.

20 COMMAND MODE switch

To remotely control this VCR with the supplied wireless Commander, set this selector to the same position as that on the Commander. Usually set to VTR 3.

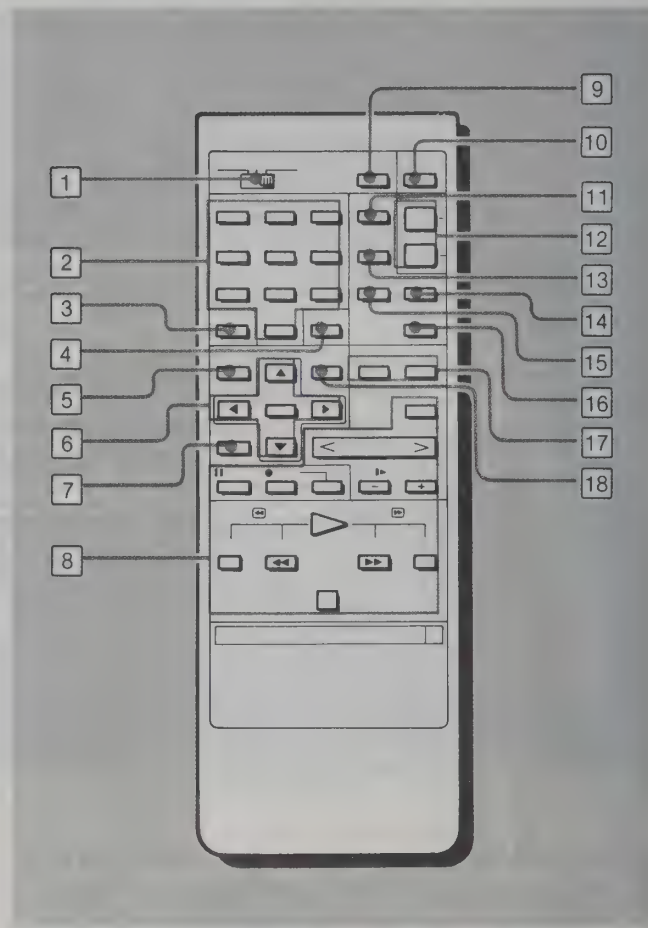
Identifying the Operational Parts

Rear Panel



- 1 VHF/UHF IN/OUT connectors (F type)**
Connect to the VHF/UHF connectors on your TV referring to the "Connections" section. On-screen displays are output via the VHF/UHF OUT connector.
- 2 CONTROL S IN jack (mini type)**
Connect to the CONTROL S output jack of another Sony product for systematic operations such as synchronized editing.
- 3 LINE IN 1 VIDEO and AUDIO jacks (phono type)**
Connect to the video/audio output jacks of other VCR.
- 4 LINE OUT VIDEO and AUDIO jacks (phono type)**
Connect to the video/audio input jacks of other VCR. Note that various on-screen display will not be output via the LINE OUT VIDEO jack.
- 5 MONITOR OUT VIDEO and AUDIO jacks (phono type)**
Connect to the video/audio input jacks on a TV. On-screen displays are output via this connector.
- 6 AC OUTLET (unswitched, max. 400 W)**
Supplies AC power to video or audio equipment. Do not connect any equipment with power consumption exceeding 400 W.
- 7 AC IN**
Connect the supplied AC power cord.
- 8 RF UNIT selector**
Use to select the channel for VCR playback, 3 CH or 4 CH, whichever is not active in your area.

Remote Commander



- 1 COMMAND MODE selector**
To remotely control the VCR with the Commander, set this selector to the same position as that on the unit. Normally set to VTR 3. Change the position as shown below to control other Sony VCRs:
VTR 1: For Sony Betamax format VCRs
VTR 2: For Sony 8mm format VCRs
VTR 3: For Sony VHS format VCRs
- 2 Channel number buttons**
- 3 TIMER CLEAR button**
Use to clear timer programs.
- 4 ENTER button**
Used to enter channel numbers. For example, to select channel 10, press 1, 0, and then ENTER.
- 5 MENU button**
Press to enter the MENU mode. Press again to get out of the MENU mode.
- 6 EXECUTE button and cursor shift ▲/▼/◀/▶ buttons**
Use to preset items in various menu operations.

7 FUNCTION MEMORY button

Use to execute the tape operation selected from the FUNCTION MEMORY menu.

8 Tape transport buttons

■ PAUSE

● REC (Press the two buttons simultaneously)

▶ SLOW (+: to increase the speed, -: to slower the speed)

</> DIRECTION (Press to determine the direction of ▷ PLAY, x 2, and ▶ SLOW. During still mode, frame-by-frame picture is available with this button.)

x 2 (double-speed)

◀◀ / ▶▶ SEARCH (reverse/forward)

▷ PLAY

◀◀ REW (rewind)

▶▶ FF (fast-forward)

■ STOP

9 ANT TV/VTR (Antenna TV/VTR) button

When connecting the VCR and a TV via the VHF antenna terminal, press this button so that VTR indicator lights in the display window. When you wish to watch TV programs while the VCR is in use, press it so that the VTR indicator is turned off.

10 POWER switch

11 INPUT SELECT button

Press to select the source to be recorded. The selected input mode indicator will appear in the display window.

12 CHANNEL +/- buttons

13 REC MODE button

Press to select the recording tape speed, SP or EP.

When playing back, the tape speed will be automatically detected regardless of the setting of this button.

14 INDEX button

Press to enter the index function mode.

15 DATA SCREEN button

Press to erase or call up the on-screen display.

16 COUNTER RESET button

Press to reset the counter to 0H00M00S.

17 INDEX MARK/ERASE buttons

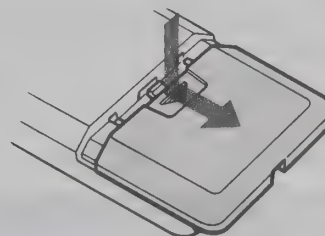
Press MARK to mark an index signal at the desired point on a tape during recording or playback. To erase a previously recorded index signal, locate the index signal and press ERASE.

18 TIMER REC (ON/OFF) button

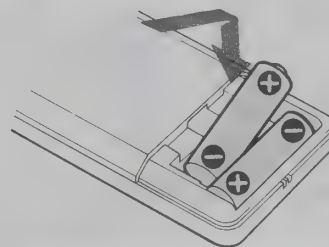
Press this button to enter the timer recording standby mode. Press it again to release the timer recording standby mode before changing or canceling a timer recording or to operate the unit before a timer recording starts.

Battery Insertion

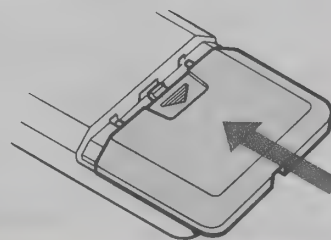
1 Open the lid.



2 Insert two size AA (IEC designation R6) batteries with the polarity lined up correctly.



3 Close the lid.



Notes on batteries

- With normal operation, the batteries will last for approximately 6 months.
- If the Commander will not be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.

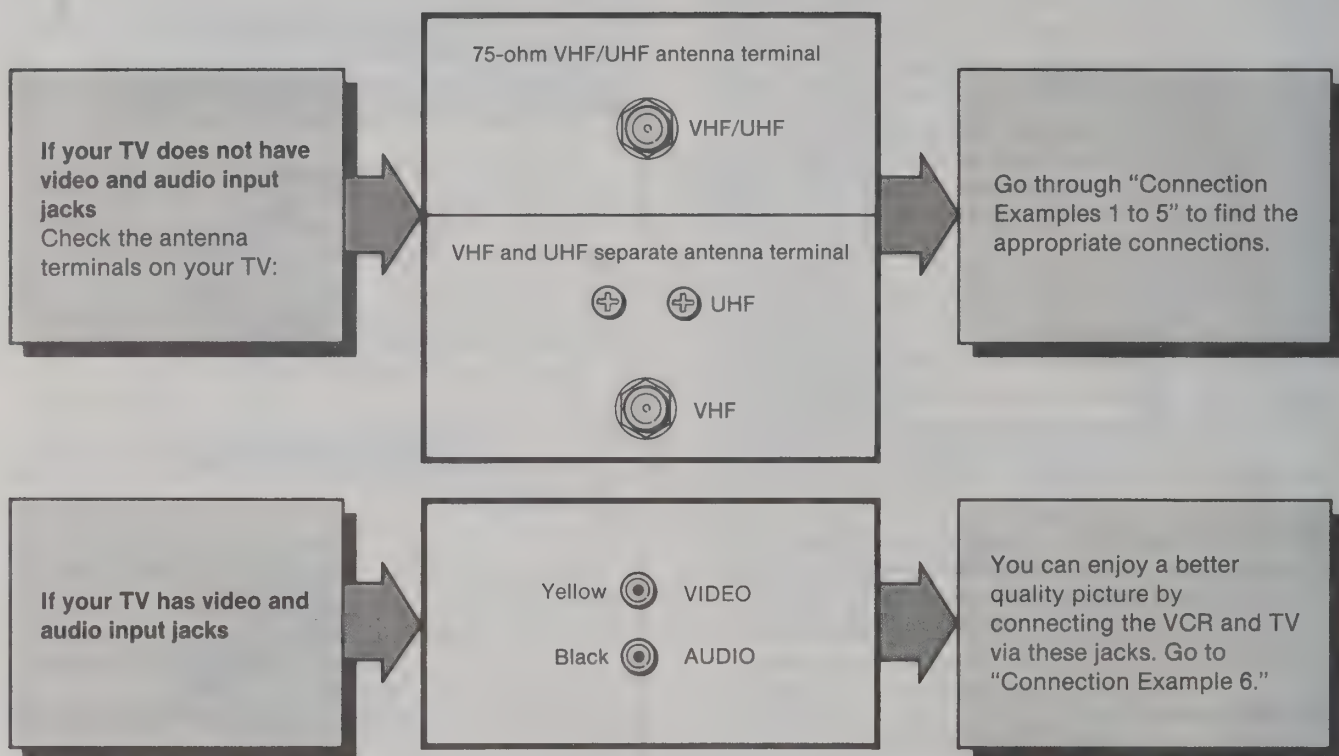
Connections

In order to watch the playback picture on the TV screen and to receive TV programs on this VCR, the VCR and the TV receiver must be connected properly. The connection between the two units varies depending upon the type of TV receiver and antenna that you have. We will show you here some typical ways to make connections with the supplied accessories. Before operating the unit, read through this section and make the correct connections.

Before You Begin...

- Turn off the power to the VCR and the TV.
- Disconnect the AC power cord of the VCR and the TV from the wall outlet.
- Do not connect the AC power cords until all of the connections are completed.
- **If your TV does not match the three examples below...** Consult your nearest Sony dealer or qualified technician.

First Check Your TV

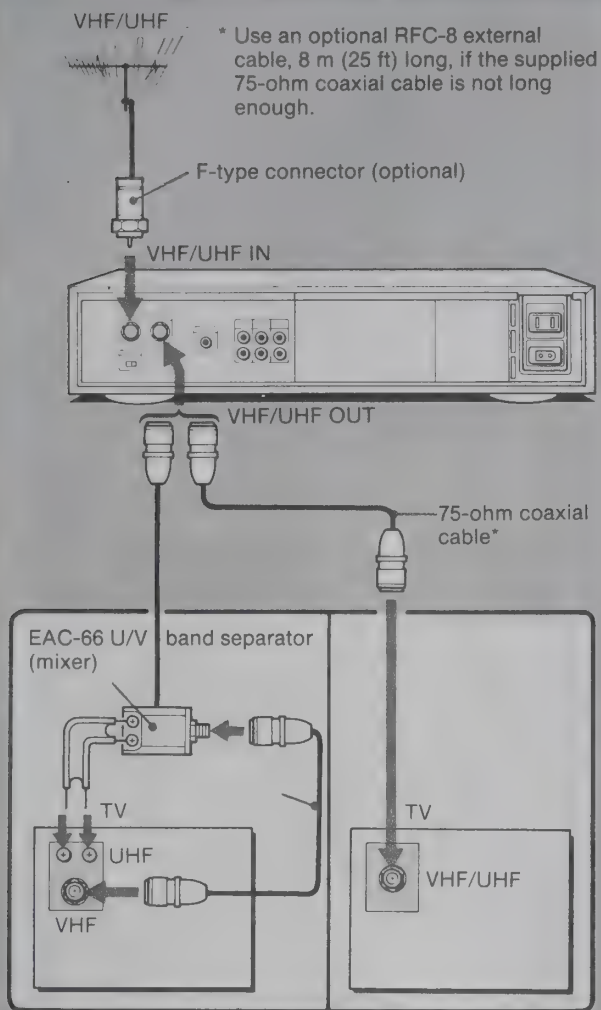


Caution

Connections between the recorder VHF/UHF OUT connector and the antenna terminals of a TV receiver should be made only as shown in the instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications

Commission regarding the use and operation of rf devices. Never connect the output of the recorder to an antenna or make simultaneous (parallel) antenna and recorder connections at the antenna terminals of your receiver.

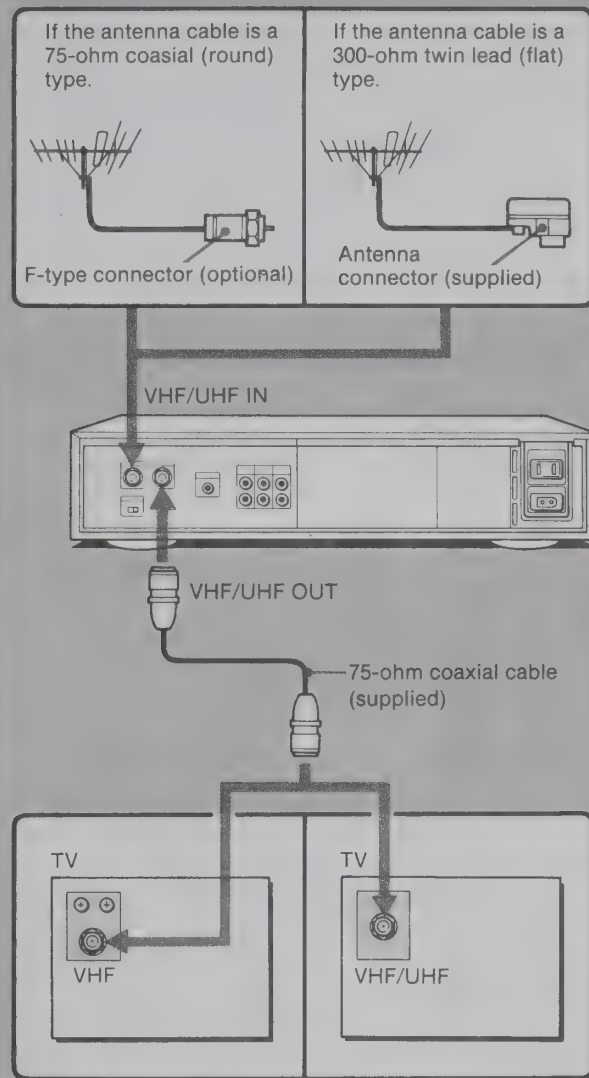
Connection Example 1 — To Connect a Combination VHF/UHF Antenna



- 1** Disconnect the TV antenna cable from the TV receiver and connect it to the VCR.
- 2** Connect the VCR and the TV.
 - If the TV has a single terminal for the VHF/UHF antenna
Connect directly using the supplied 75-ohm coaxial cable.
 - If the TV has separate VHF/UHF antenna terminals
Use a U/V band separator.

How to attach the U/V band separator and the F-type connector
See page 15.

Connection Example 2 — To Connect a VHF Antenna Only

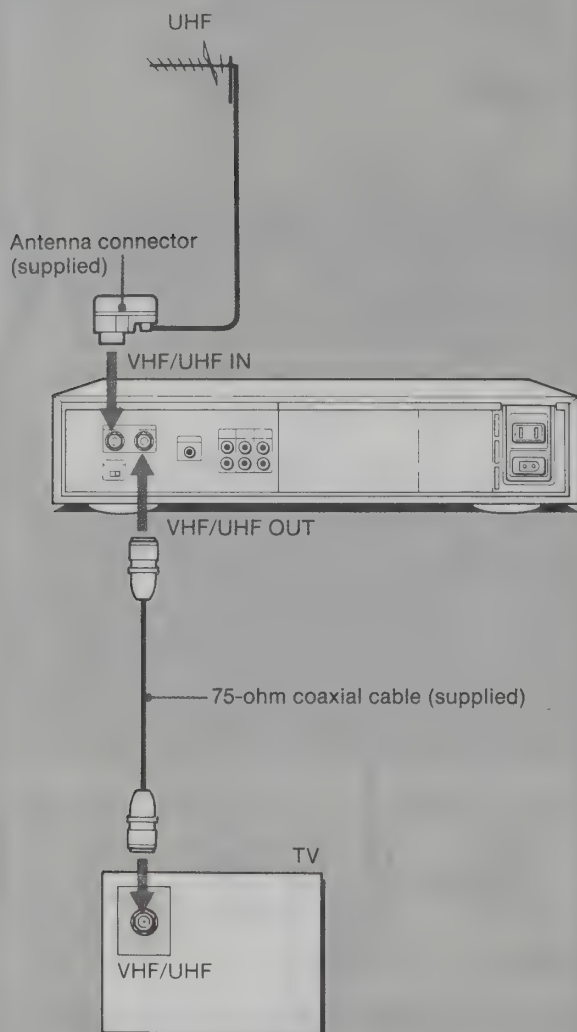


- 1** Disconnect the TV antenna cable from the TV and connect it to the VCR.
 - If the antenna cable is a 75-ohm coaxial (round) type
Use an F-type connector (optional).
 - If the antenna cable is a 300-ohm twin lead (flat) type
Use the antenna connector (supplied).
- 2** Connect the VHF/UHF OUT on the VCR and the VHF IN terminal on the TV with the 75-ohm coaxial cable (supplied).

How to attach the antenna connector and an F-type connector
See page 15.

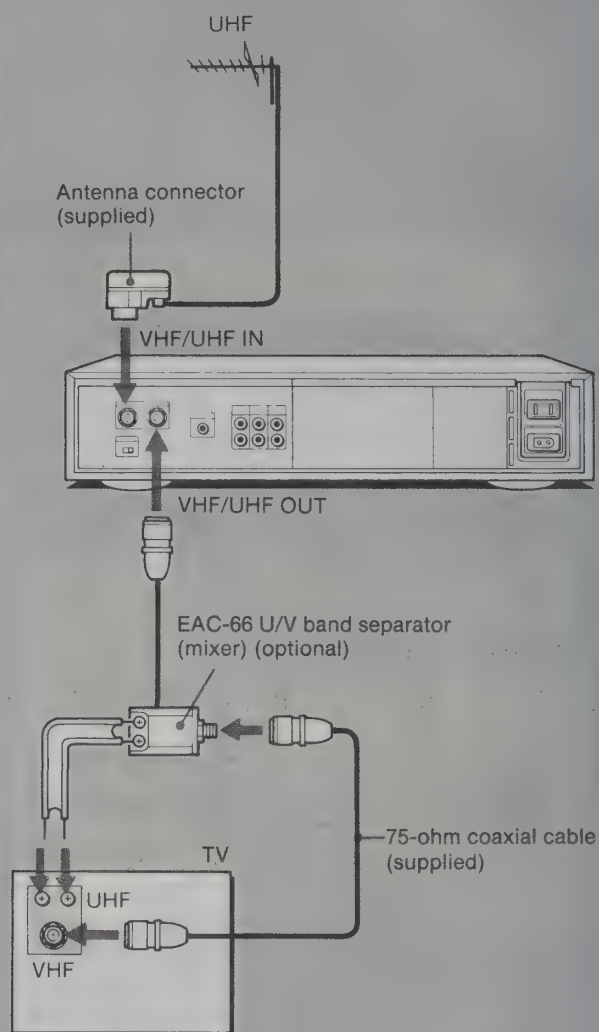
Connection Example 3 — To Connect a UHF Antenna Only

When the VHF/UHF antenna terminal on the TV is combined



- 1** Attach the supplied antenna connector to the cable.
- 2** Attach the antenna connector to VHF/UHF IN on the VCR.
- 3** Connect VHF/UHF OUT on the VCR and the VHF/UHF antenna terminal on the TV.

When the VHF/UHF antenna terminals on the TV are separated

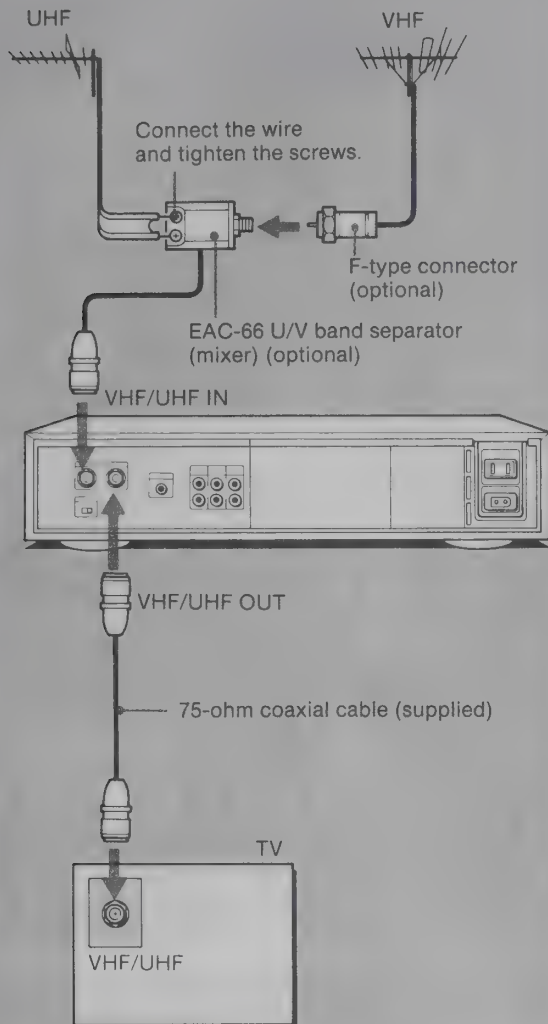


- 1** Attach the supplied antenna connector to the cable.
- 2** Attach the antenna connector to VHF/UHF IN on the VCR.
- 3** Attach an optional EAC-66 U/V band separator to the VHF/UHF OUT on the VCR.
- 4** Connect the separator to the VHF and UHF antenna terminals on the TV.

How to attach the antenna connector and the U/V band separator
See page 15.

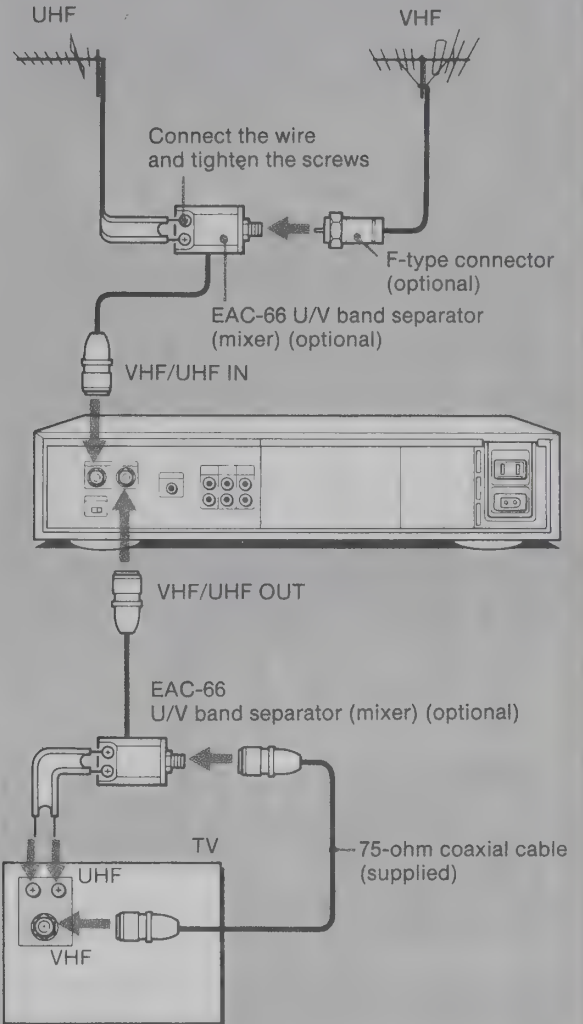
Connection Example 4 — To Connect both VHF and UHF Antennas

When the VHF/UHF antenna terminal on the TV is combined



- 1** Attach an optional U/V band separator to the VHF and UHF antennas and then to the VHF/UHF IN on the VCR.
- 2** Connect the VHF/UHF OUT on the VCR and the VHF/UHF antenna terminal on the TV.

When the VHF/UHF antenna terminals on the TV are separated



- 1** Attach an optional U/V band separator with the VHF and UHF antennas to the VHF/UHF IN on the VCR.
- 2** Attach an optional U/V band separator to the VHF/UHF OUT on the VCR.
- 3** Connect the separator to the VHF and UHF antenna terminals on the TV.

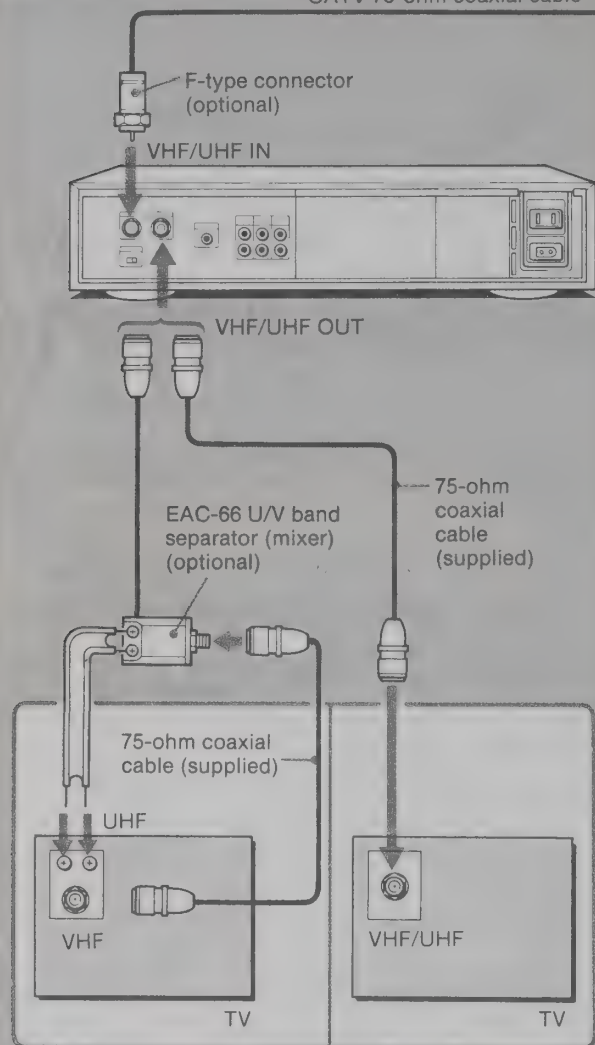
How to attach an U/V band separator and an F-type connector

See page 15.

Connection Example 5 — To Connect a Cable TV System

If your TV has a built-in CATV decoder

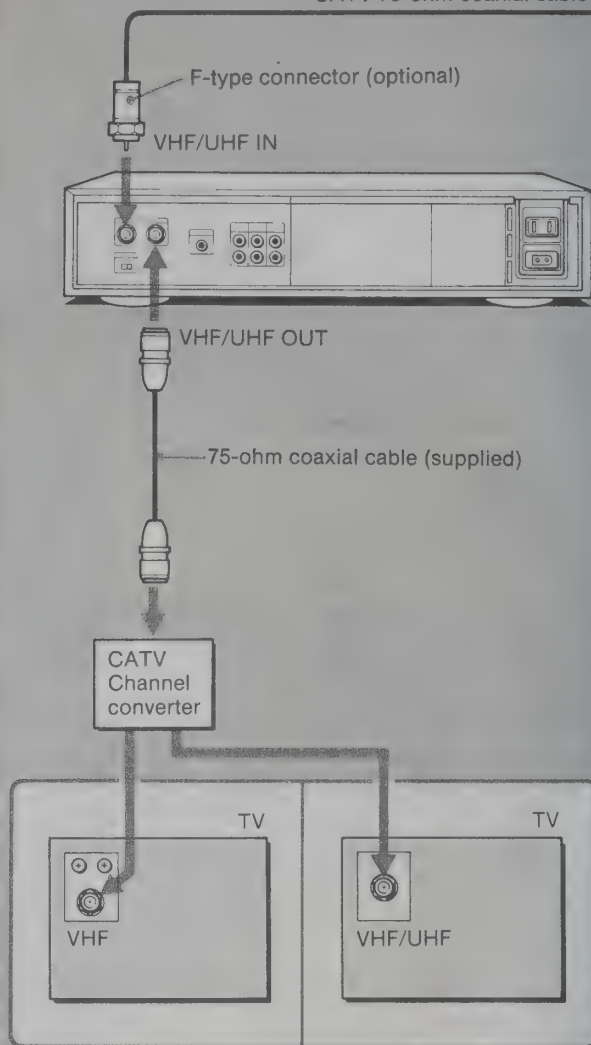
CATV 75-ohm coaxial cable



A connection example is given above, but we recommend that you consult your cable company to make sure that the cable is properly connected.

If your TV does not have a built-in CATV decoder

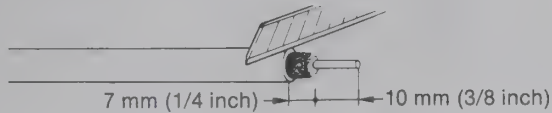
CATV 75-ohm coaxial cable



Connect the cable TV channel converter between the TV and the VCR. By setting the TV/VTR switch to TV, you can watch a cable TV program while playing back or recording video sources using the VIDEO LINE IN jack on the VCR.

Attaching an F-type connector

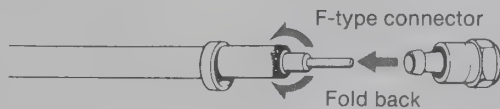
- 1 Strip 1/4 inch from the end of the cable so that 3/8 inch of the center conductor is exposed.



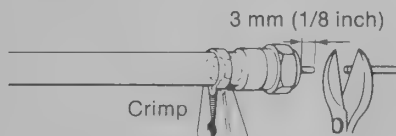
- 2 Slip the crimping ring over the cable.



- 3 Insert the inner conductor into the F-type connector shaft and push the end of the cable into the connector as far as it will go.



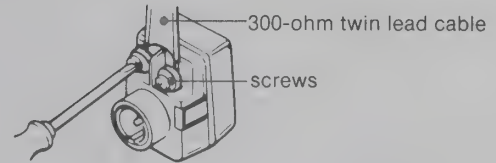
- 4 Slide the crimping ring over this assembly. Then pinch the crimping ring with pliers to hold the connection in place.



- 5 Insert the F-type connector into VHF/UHF IN on the VCR.

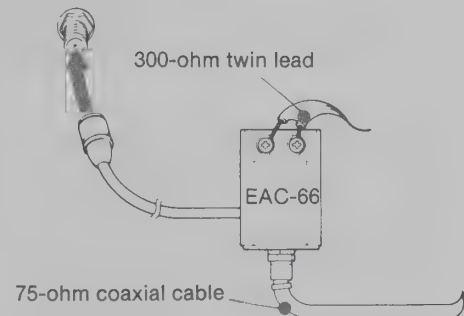


Attaching an external antenna connector



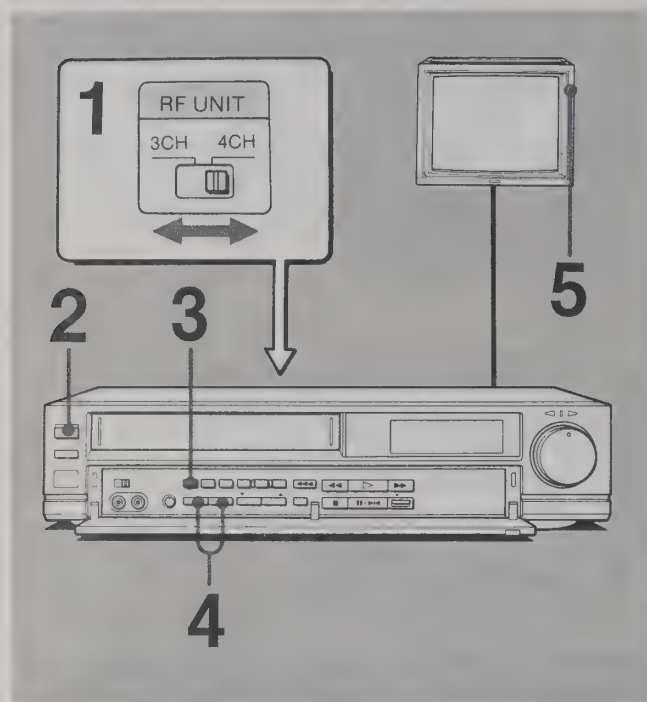
- 1 Loosen the screws on the antenna connector.
- 2 Fit the 300-ohm twin lead cable on the UHF antenna under the screws on antenna connector.
- 3 Tighten the screws again.

Attaching an optional EAC-66 U/V band separator/mixer



- 1 Loosen the screws on the U/V band separator.
- 2 Fit the 300-ohm twin lead cable under the screws.
- 3 Connect the 75-ohm coaxial cable to the U/V band separator.
- 4 Connect the U/V band separator to the VHF/UHF IN on the VCR.

Setting the RF Unit



Why this setting is necessary

Your TV must be set to receive the signal from your VCR. To get the proper RF signal, set the RF UNIT selector switch on the rear panel of the VCR. If channel 4 CH is active in your area, set the switch to 3 CH, and vice versa. If you connect a color monitor or a TV equipped with video/audio input jacks, you do not need to make this adjustment.

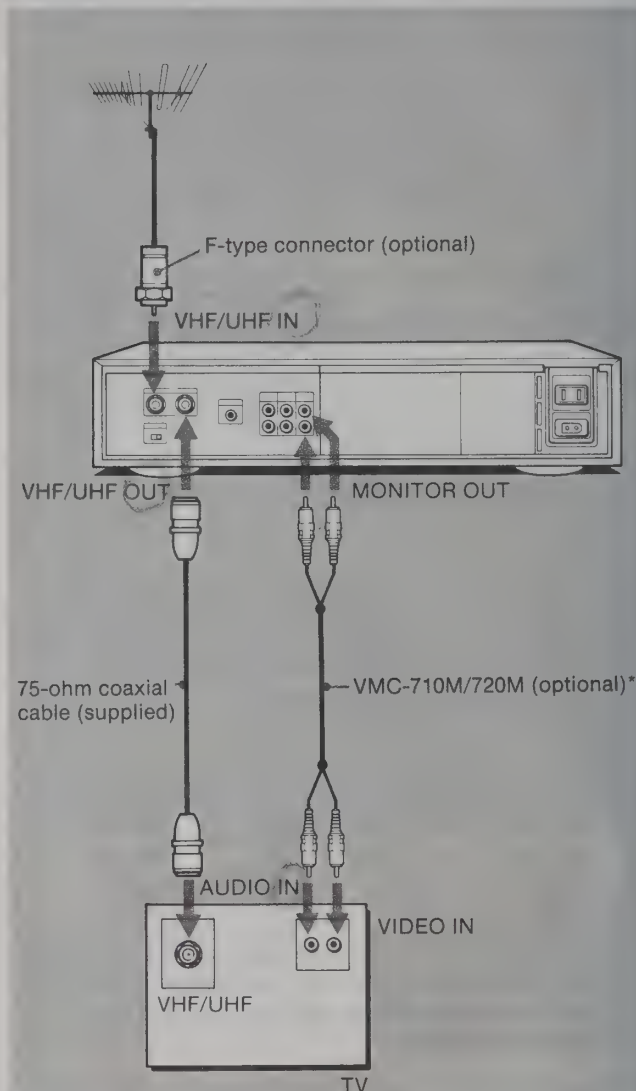
- 1** Set the RF UNIT at the rear to 3 CH or 4 CH, whichever is not active in your area.
- 2** Press POWER.
The indicator will light.
- 3** Press ANT TV/VTR so that the VTR indicator lights.
- 4** Check that the TUNER indicator appears in the display window, then select an active channel in your area by pressing CHANNEL +/-.
- 5** Turn on the TV and set the TV to the channel selected in step 1.
The TV program selected on the VCR will appear on the screen.

Your TV is now tuned to the VCR. Whenever you use the VCR, set the TV to the channel selected above.

Note

For details about TV channel adjustment, see the instruction manual of the TV.

Connection Example 6 — To Connect a TV Equipped with Video/Audio Input Jacks



For a high-quality picture, connect a color monitor or a TV equipped with video/audio input jacks.

- 1** Connect the VHF/UHF antenna to the VHF/UHF IN on the VCR.
- 2** Connect the VHF/UHF OUT on the VCR and the VHF/UHF IN terminal on the TV with the supplied 75-ohm coaxial cable.
- 3** Connect the MONITOR OUT jacks on the VCR and the video/audio input jacks on the TV with the video connecting cable and audio connecting cable.

* When your TV is a stereo type, use the optional VMC-910MS/920MS connecting cable.

Preparation

The SLV-353UC is equipped with a menu display function. Menu display enables you to perform certain operations which are displayed on the TV or the monitor.

First display the main MENU, and select the item to be operated or preset.

Main MENU Display

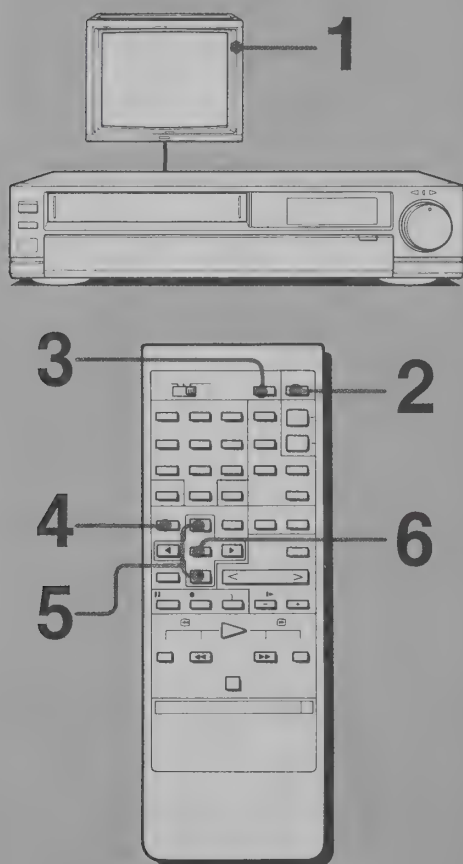
MENU

- ▶ AUTO MENU
- TIMER SET/CHECK
- MODE SET
- TUNER PRESET
- FUNCTION MEMORY
- CLOCK SET
- DEMONSTRATION

How to Display the Main MENU

Before you begin

- Check the connections between the VCR and the TV.
- On-screen display is output from the VCR's VHF OUT connector or MONITOR OUT jack. If your TV is equipped with video/audio input jacks, connect it to MONITOR OUT, not to the LINE OUT jacks.



Operation

- 1 Turn on the TV.**
If your TV is equipped with video/audio input jacks
 Select the input for the VCR.
If your TV is not equipped with video/audio input jacks
 Select the channel for the VCR (3 or 4).

- 2 Press POWER.**

- 3 Press ANT TV/VTR so that the VTR indicator lights.**
 (Only for TVs without video/audio input jacks.)

- 4 Press MENU.**
 The main MENU will appear on the screen.

- 5 Move cursor to the desired menu by ▲ or ▼.**

- 6 Press EXECUTE.**
 The selected MENU will appear on the screen.

To erase the menu display
 Press MENU again.

To display other MENU screens

- 1 Press MENU to erase the present display.
- 2 Press MENU again to display main MENU.
- 3 Move cursor to the desired menu.
- 4 Press EXECUTE.

Note

The position of the cursor is retained as long as the power cord is connected.

Details of Each Menu

Here is a list of the menus in the main MENU. For details, refer to the sections indicated.

AUTO MENU

Use to select an automatic tape operation. See "Presetting the VCR's Operation" (page 29).

TIMER SET/CHECK

Use to preset a timer recording and let's you check the settings. See "Timer Recording" (page 38).

MODE SET

Use to set the desired mode. See "Mode Setting" (page 20).

TUNER PRESET

Use to preset the active channels in your area. See "Presetting Active Channels" (page 24).

FUNCTION MEMORY

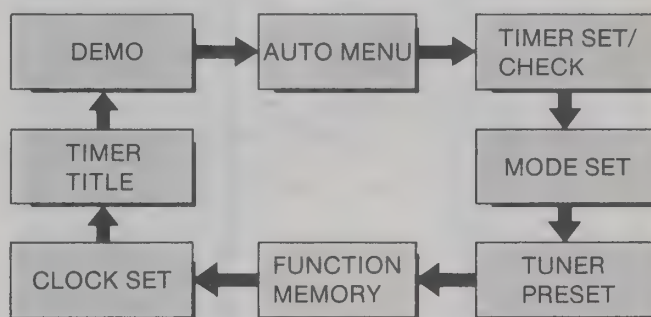
Use to set an automatic tape operation. With one press of the FUNCTION MEMORY button, the tape operation will start. See "Presetting the VCR's Operation" (page 30).

CLOCK SET

Use to set the clock. See "Date and Clock Setting" (page 22).

DEMONSTRATION

Use to display the contents of each menu and an example of TIMER TITLE one after the other. The display sequence is as follows:



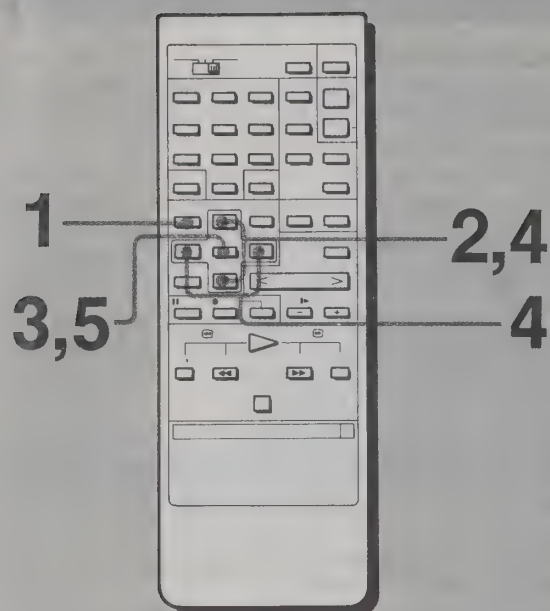
Press any button except EXECUTE to get out of the DEMONSTRATION menu.

Mode Setting

Before operating the unit, set the items in the MODE SET menu.

Operation

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to select the items.



1 Press MENU.

MENU

▶ AUTO MENU
TIMER SET/CHECK
MODE SET
TUNER PRESET
FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

2 Move cursor to MODE SET.

MENU

AUTO MENU
TIMER SET/CHECK
▶ MODE SET
TUNER PRESET
FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

3 Press EXECUTE. MODE SET menu appears.

MENU

▶ AUTO ANT SEL • ON OFF
TIMER TITLE • ON OFF
TIMER REC - REW ON • OFF
BACK COLOR • BL GR PK

4 Select the desired setting for each mode.

AUTO ANT SEL (Automatic Antenna Selector)

ON: Automatically displays the playback picture of the VCR on the screen when a tape is played back.

OFF: The picture on the TV screen be changed by pressing ANT TV/VTR.

If your TV is not equipped with video/audio inputs

Normally set to ON.

- **To view the picture played back or recorded on the VCR:**

Press ANT TV/VTR to light the VTR indicator. In the ON setting, the VTR indicator will automatically be lit when playing back a tape.

- **To watch TV programs:**

Press ANT TV/VTR to turn off the VTR indicator and select the desired program on the TV.

If VCR-TV connection is made via the video/audio inputs

Set to OFF to easily select the VCR's playback picture on the TV.

- **To view the picture played back or recorded on the VCR:**

Select video input on the TV to view higher quality picture.

- **To watch TV programs:**

Select the desired program on the TV.

- When the called up channel has programs preset, but no antenna connection is made or the signal is weak or no program is broadcasted.
- When selecting line inputs that has no connected equipment.
- When the picture has noise.

5 Press EXECUTE.

The settings will be memorized.

TIMER TITLE

For details, see "Timer Recording" (page 44).

TIMER REC - REW (Timer Recording - Rewind)

For details, see "Timer Recording" (page 46).

BACK COLOR

Select the desired background color for the each menu, program list and timer title.

BL: blue (factory setting)

GR: green

PK: pink

The screen will turn to the selected color in these cases:

- When playing back tape with no signals recorded.
- When calling up channels with no programs preset.

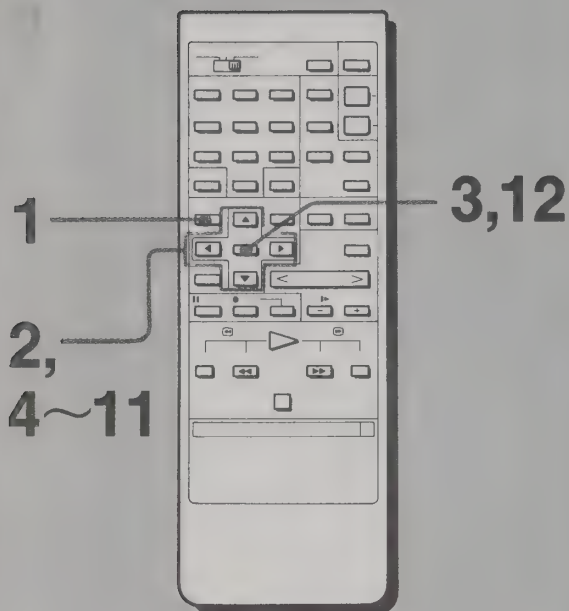
Date and Clock Setting

You can set the date and clock on the TV screen with the Remote Commander.

Operation

Example: To set to 3:32 pm, August 4, 1989.

Use ▲ and ▼ to change the numbers.
Use ◀ and ▶ to change the blinking items.



1 Press MENU.

MENU

▶ AUTO MENU
TIMER SET/CHECK
MODE SET
TUNER PRESET
FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

2 Move cursor to CLOCK SET.

MENU

AUTO MENU
TIMER SET/CHECK
MODE SET
TUNER PRESET
FUNCTION MEMORY
▶ CLOCK SET
DEMONSTRATION

3 Press EXECUTE.

"1/1 1989 SUN AM 12:00"
will be displayed. The left
most 1, in the "month"
position, is blinking.

CLOCK SET

1/1 1989 SUN AM 12:00

4 Press ▲ until 8 appears in the month position.

CLOCK SET

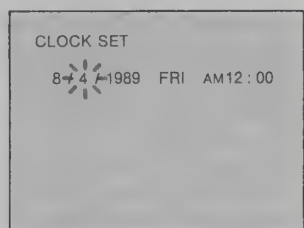
8/1 1989 TUE AM 12:00

5 Press ▶ to make the next number, in the "day" position blink.

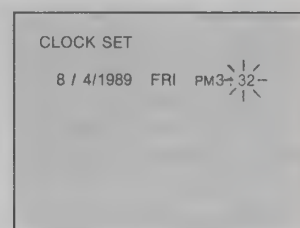
CLOCK SET

8/1 1989 TUE AM 12:00

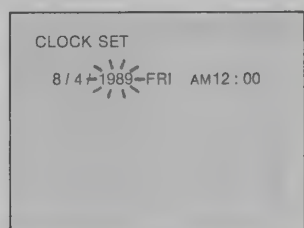
- 6** Press ▲ until 4 appears in the day position.
The day of the week is automatically set.



- 11** Press ▲ or ▼ until 32 appears in the minute position.

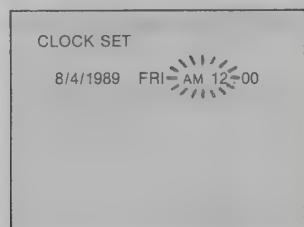


- 7** Press ► to make the year blink and press ▲ to change the year if necessary.



- 12** Press EXECUTE simultaneously with a time signal.
Press of EXECUTE will set the clock to 3:32 pm 00 seconds.

- 8** Press ► to make the "hour" position blink.

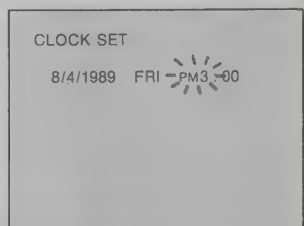


To recall the date and clock on the screen
Select CLOCK SET in the main MENU and press EXECUTE.

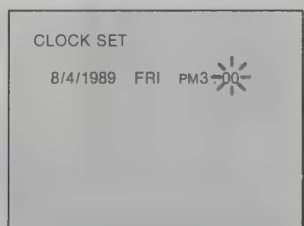
Notes

- You can perform clock setting except during timer recording, timer recording stand-by, quick timer recording.
- When the date and clock are called up on the screen, the clock keeps running as long as no modification is made. The seconds will not be reset to 00 when you return to the original screen.

- 9** Press ▲ or ▼ until PM 3 appears.



- 10** Press ► to make the minute blink.

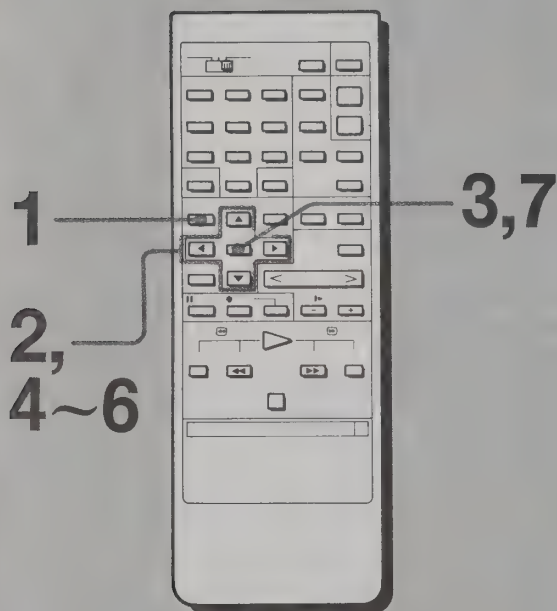


Presetting Active Channels

Your VCR is capable of receiving TV programs broadcast on VHF/UHF channels 2 to 69 and CATV channels 1 to 125. These channels can be preset on the TV screen using the Remote Commander and the TUNER PRESET menu. First, we recommend that you preset the active channels in your area using the automatic preset mode. Then, if there are any unwanted channels, delete them manually. If you've already decided which channels you wish to preset on the VCR, set them directly by using the channel number buttons.

To Preset All Receivable Channels Automatically

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to select the items.



Before Presetting Channels

Turn on the VCR and the TV.

- Connect the VCR and the TV using either MONITOR OUT or AERIAL OUT on the VCR.
- If your TV is not equipped with video/audio input jacks, make sure that the TV is set to the correct channel (3 or 4) for the VCR.
- Press ANT TV/VTR to display the VTR indicator.
- Press INPUT SELECT so that the TUNER indicator and channel number appear in the display window.

1 Press MENU.

MENU

- ▶ AUTO MENU
- TIMER SET/CHECK
- MODE SET
- TUNER PRESET
- FUNCTION MEMORY
- CLOCK SET
- DEMONSTRATION

2 Move the cursor to TUNER PRESET.

MENU

- AUTO MENU
- TIMER SET/CHECK
- MODE SET
- ▶ TUNER PRESET
- FUNCTION MEMORY
- CLOCK SET
- DEMONSTRATION

3 Press EXECUTE. The TUNER PRESET display will appear.

TUNER PRESET 2CH

- NORMAL/CATV • NORM CATV
- AUTO PRESET
- ▶ MANUAL SET • ADD ERASE
- AFT • ON OFF
- FINE TUNING

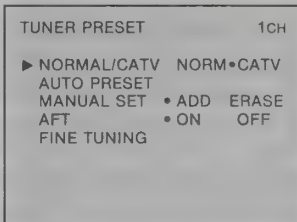
4 Move cursor to NORMAL/CATV.

TUNER PRESET 2CH

- ▶ NORMAL/CATV • NORM CATV
- AUTO PRESET
- MANUAL SET • ADD ERASE
- AFT • ON OFF
- FINE TUNING

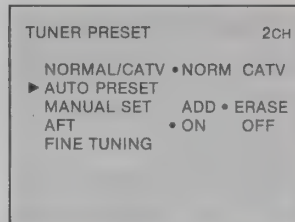
**5 Select NORM to preset VHF and UHF channels.
Select CATV to preset cable TV channels.**

The lowest channel number, 2 for NORM and 1 for CATV will appear on the screen.

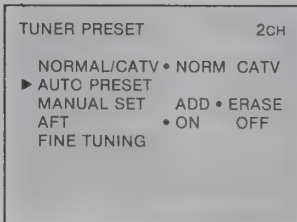


7 Press EXECUTE.

Receivable channels will be preset in numerical sequence. When no more channels can be found, the presetting will stop and the lowest numbered channel will be displayed.

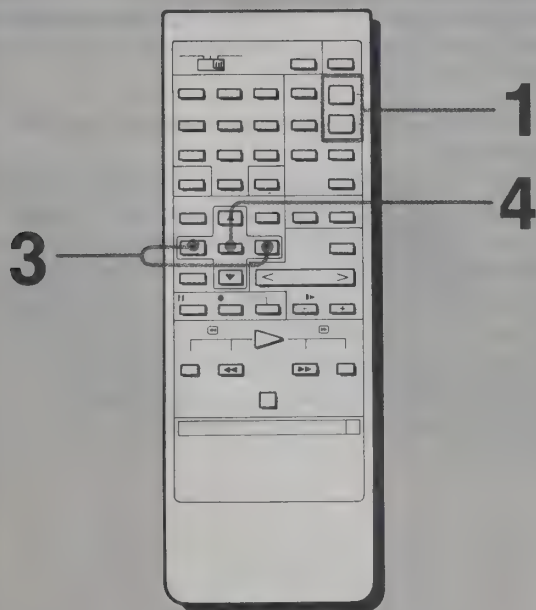


**6 Move cursor to
AUTO PRESET.**



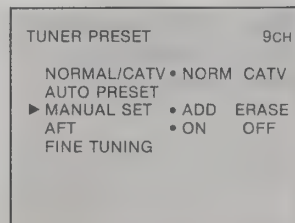
To Preset Only the Desired Channels or to Erase Unnecessary Channels

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to select the items.



1 After automatic presetting is over press CHANNEL +/- to select the channel to be added or erased.

2 Follow steps 1 to 3 in "To Preset All Receivable Channels Automatically."



**3 To add channels Select ADD.
To erase channels Select ERASE.**

4 Press EXECUTE.
When pressing CHANNEL +/-, the erased channel will be skipped and the added channel will be displayed.

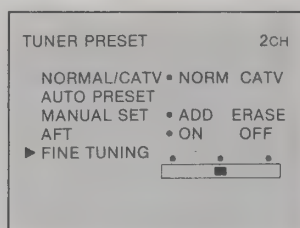
Fine-tuning

Normally the AFT (Auto Fine Tuning) setting is set to ON and the AFT function fine-tunes the picture. If the picture of a particular channel is not acceptable, fine-tune manually.

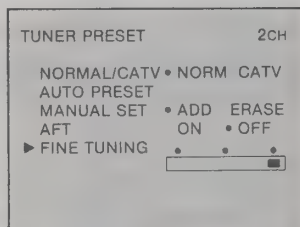
Operation

- 1 Call up the **TUNER PRESET** menu referring to steps 1 to 3 in "To Preset All Receivable Channels Automatically."

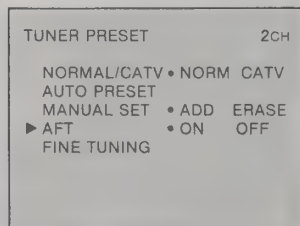
- 2 Press **▲** or **▼** move the cursor to **FINE TUNING**. The fine tuning indicator will appear.



- 3 Press **◀** or **▶** to get a clearer picture. The AFT ON/OFF will automatically be switched to OFF.



- 4 Press **▲** to move the cursor to **AFT** and select **ON** if you cannot get a better picture.



About the FINE TUNING indicator

The FINE TUNING indicator shows the operable fine-tuning range. When the VCR's tuner is receiving a broadcast signal in the best condition, the indicator will be at the center position or within one space right or left of the center position. However, even when a broadcast is received in the best condition, there may be cases when the indicator will not be at the position explained above.

Cable TV channel assignment

Cable TV systems use letters or numbers to designate the channels. To tune-in a CATV channel, refer to the chart below which shows the CATV channel numbers on this VCR and the corresponding CATV channel. Note that the channel number assignment shown in the chart may not correspond to the channel number used by your local cable company. Check with your local cable TV company for more information on the available channels.

Number on this VCR	1	2 ... 13	14	15	16	17	18
Corresponding CATV channel	A-8	2 ... 13	A	B	C	D	E

19	20	21	22	23	24	25	26	27	28	29	30	31	32
F	G	H	I	J	K	L	M	N	O	P	Q	R	S

33	34	35	36	37 ... 94	95	96	97	98	99
T	U	V	W	W+1 ... W+58	A-5	A-4	A-3	A-2	A-1

100	...	125
-----	-----	-----

W+59	...	W+84
------	-----	------

This VCR is designed to correspond to the Standard cable system. However, the cable TV services may vary from area to area. Your local cable TV company may be either the HRC*¹ or IRC*² cable system. Even in these cases, this VCR is capable of receiving either of these cable systems in the best condition.

*1 HRC (Harmonic Related Carriers)

All channels except for 5 and 6 are 1250 kHz lower than the Standard cable system. Channels 5 and 6 are 750 kHz higher than the Standard cable system.

*2 IRC (Incremental Related Carriers)

All channels except for 5 and 6 are the same as the Standard cable system. Channels 5 and 6 are 2000 kHz higher than the Standard cable system.

FINE TUNING indication when receiving HRC or IRC cable systems

Even when the signals are received in the best condition, the FINE TUNING indicator will not stay at the center position for channels higher or lower than the Standard cable system because of the difference in the frequency.

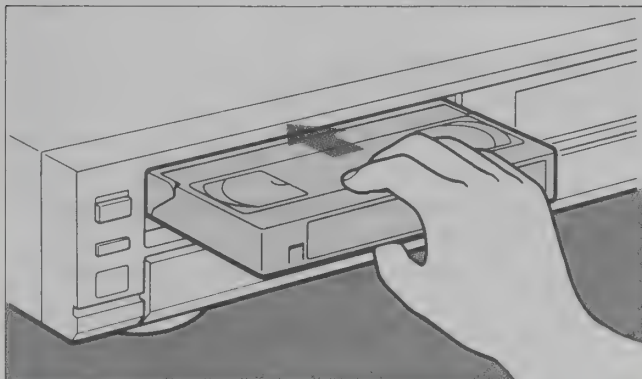
Note

Pay cable TV systems use scrambled or encoded signals and require special converters (decoders) in addition to the normal cable connection.

Handling Video Cassettes

Inserting a Cassette

Insert the cassette fully into the compartment by slowly pressing its center with the arrow indication facing upwards. If the AC power cord is connected to the wall outlet, the power will be automatically turned on.

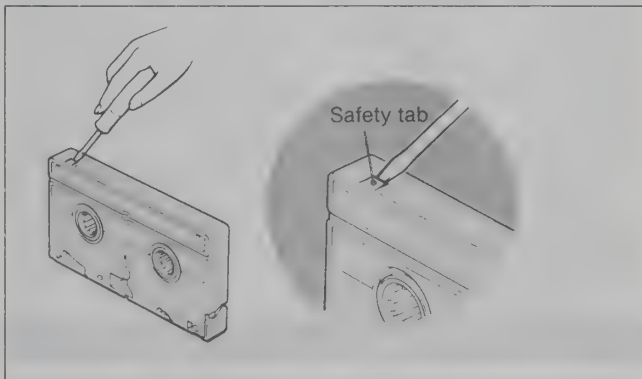


Ejecting a Cassette

Press \blacktriangle EJECT to eject the cassette. As long as the AC power cord is connected to the wall outlet, the cassette can be ejected even when the power of the unit is turned off.

To Avoid Erasing Previously Recorded Video Cassette

When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased. To avoid unintentional erasure, break off the safety tab on the cassette. To re-record on the cassette, cover the slot where the safety tab used to be with plastic tape.



Maximum Recording Time of a Tape

Recording in the SP or EP mode is possible with this VCR. When recording, select the desired recording mode (SP or EP) with REC MODE on the Remote Commander or the VCR. During playback, the VCR automatically detects the recording format, and then plays the tape back in the appropriate mode. A tape recorded in the EP mode runs three times as slower as a tape recorded in the SP mode. Refer to the chart below for the recording/playback time available in each mode.

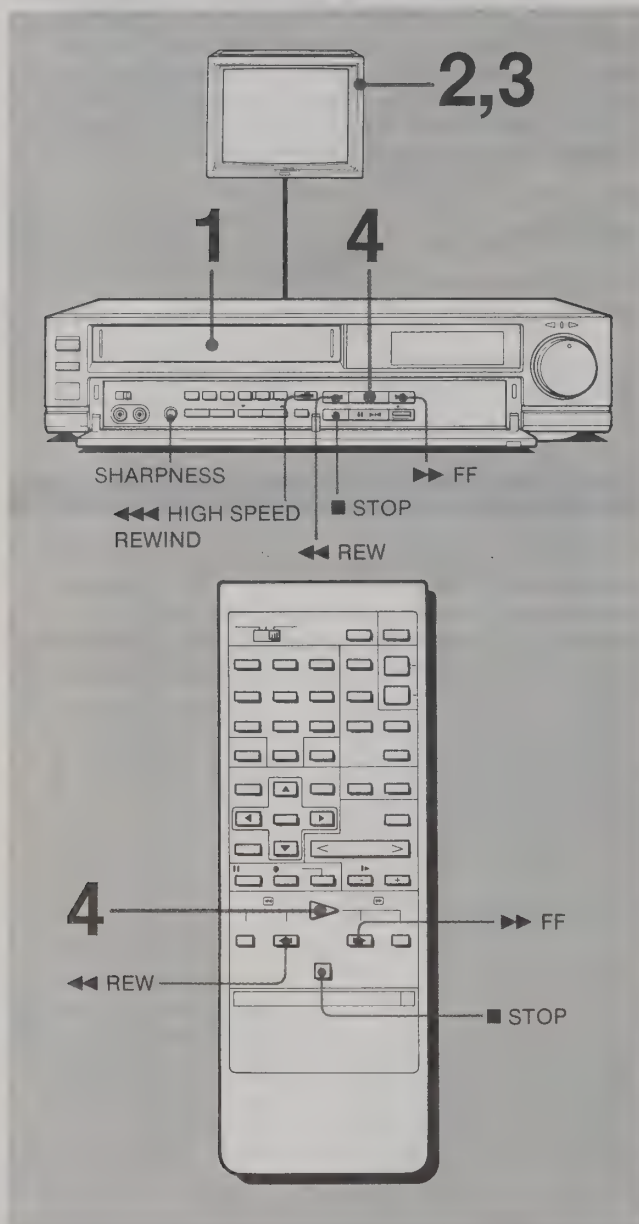
REC MODE setting	Cassette tape			
	T-160	T-120	T-60	T-30
SP (standard)	2 hr. 40 min.	2 hr.	1 hr.	30 min
EP	8 hr.	6 hr.	3 hr.	1 hr. 30 min.

Tapes Recorded in LP Mode

Playback of tapes recorded in LP mode is also possible with this VCR. However, playback in modes other than normal speed forward is not guaranteed. Note that recording in LP mode is not possible. Also, note that the AUTO TRACKING function will not function.

In this section, we will explain the operations and functions related to tape playback.

Basic Playback



1 Insert a cassette.

2 Turn on the TV.

3 If your TV is equipped with video/audio input jacks
Select the input for the VCR.

If your TV is not equipped with video/audio input jacks

Select the channel for the VCR (3 or 4).

4 Press **▶ PLAY**.

To stop playback

Press **■ STOP**.

To advance the tape rapidly

Press **▶▶ FF**.

To rewind the tape

Press **◀◀ REW**.

To rewind the tape at high speed

Press **◀◀ HIGH SPEED REWIND**.

To get a sharper picture

Turn the **SHARPNESS** control toward SHARP.

To get a softer picture

Turn the **SHARPNESS** control toward SOFT.

When the tape is played back to the end

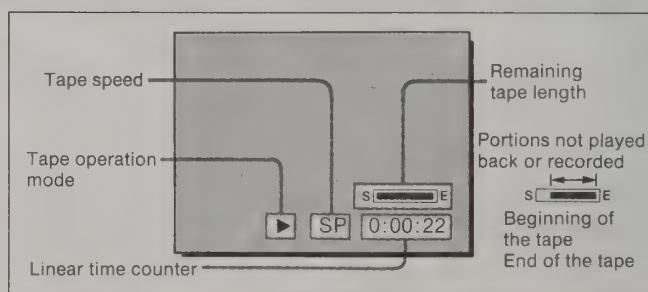
The tape will be automatically rewound to the beginning (auto rewind). The power will remain on.

About the Data Screen

To erase or call up the data screen, press DATA SCREEN on the Commander.

Notes on the remaining tape length indicator

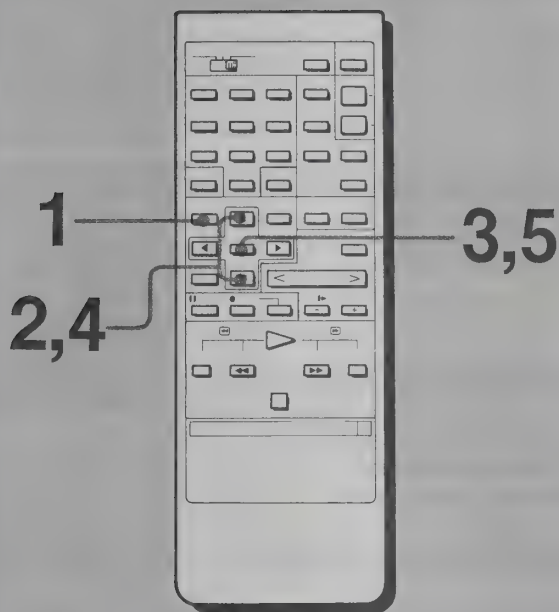
The displayed remaining tape length is not precise. Therefore, use it only as an approximate reference. When you insert a short tape such as T-20, T-30 or a non-standard commercially available tape, this indicator may not function correctly.



Presetting the VCR's Operation — Auto Play

By selecting the desired operation in the AUTO MENU and pressing **EXECUTE**, an operational sequence of several steps can be started automatically.

Use ▲ and ▼ to move the cursor.



Operation

- 1 Press **MENU** when the VCR is in the stop mode.

MENU

- ▶ AUTO MENU
- TIMER SET/CHECK
- MODE SET
- TUNER PRESET
- FUNCTION MEMORY
- CLOCK SET
- DEMONSTRATION

- 2 Move the cursor to **AUTO MENU**.

- 3 Press **EXECUTE**.
The AUTO MENU will appear.

AUTO MENU

- ▶ PLAY - REW - POWER OFF
- GO TO ZERO - STOP
- GO TO ZERO - PLAY
- GO TO REC START - PLAY
- REW - POWER OFF
- REW - EJECT - POWER OFF
- REW - PLAY
- REW - TIMER REC

- 4 Move the cursor to the desired tape operation.

AUTO MENU

- PLAY-REW-POWER OFF
- GO TO ZERO - STOP
- GO TO ZERO - PLAY
- GO TO REC START - PLAY
- ▶ REW - POWER OFF
- REW - EJECT - POWER OFF
- REW - PLAY
- REW - TIMER REC

- 5 Press **EXECUTE**.
The selected tape operation will start.
The selected tape operation mode will be indicated on the screen for several seconds.

REW - POWER OFF

SP 0:03:37

To return to the original screen without making any selection from the AUTO MENU
Press **MENU**.

When the power is turned off

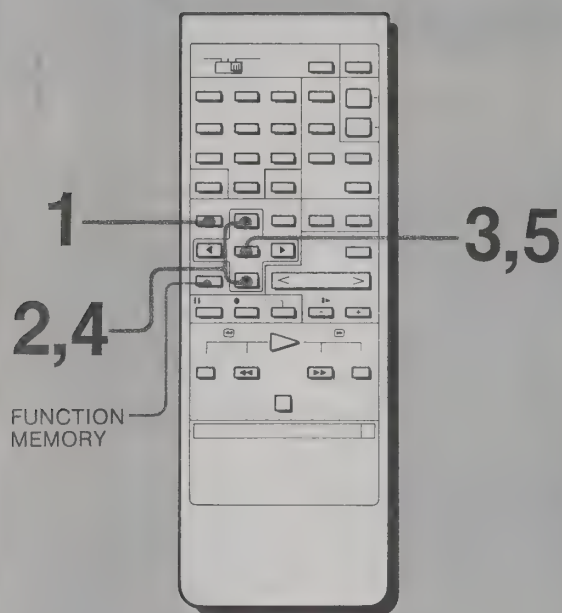
The cursor will stay at the last position it was set to.

Note on the auto play operation

You can pre-set the auto play operation only when the VCR is in the stop mode.

Assigning an AUTO MENU Operation in the FUNCTION MEMORY Button

Use ▲ and ▼ to move the cursor.



1 Press MENU.

MENU

▶ AUTO MENU
TIMER SET/CHECK
MODE SET
TUNER PRESET
FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

2 Move the cursor to FUNCTION MEMORY.

MENU

AUTO MENU
TIMER SET/CHECK
MODE SET
TUNER PRESET
▶ FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

3 Press EXECUTE. FUNCTION MEMORY menu will appear.

FUNCTION MEMORY

PLAY - REW - POWER OFF
GO TO ZERO - STOP
GO TO ZERO - PLAY
GO TO REC START - PLAY
REW - POWER OFF
REW - EJECT - POWER OFF
REW - PLAY
▶ [AUTO MENU]

4 Move cursor to the desired tape operation

FUNCTION MEMORY

▶ PLAY - REW - POWER OFF
GO TO ZERO - STOP
GO TO ZERO - PLAY
GO TO REC START - PLAY
REW - POWER OFF
REW - EJECT - POWER OFF
REW - PLAY
[AUTO MENU]

5 Press EXECUTE to return to the original screen.

Now the selected item is assigned to the FUNCTION MEMORY button. Whenever you press FUNCTION MEMORY on the Commander, the selected tape operation will start automatically.

PLAY - REW - POWER OFF

SP 0:00:46

Note on FUNCTION MEMORY

The FUNCTION MEMORY function is operable only when the VCR is in the stop mode.

What does each operation indicator mean ?

PLAY — REW — POWER OFF

The tape is played back to its end and then rewound to its beginning. Then the power is turned off.

GO TO ZERO — STOP

The tape is fast-forwarded/rewound to around the zero counter position, and stops. See "Tape Return" (page 36) for detailed operation.

GO TO ZERO — PLAY

The tape is fast-forwarded/rewound to around the zero counter position, and then is played back. See "Tape Return Play" (page 37) for detailed operation.

GO TO REC START — PLAY

The tape is fast-forwarded/rewound to the starting point of the recording, and then is played back.

REW — POWER OFF

The tape is rewound to its beginning and then the power is turned off.

REW — EJECT — POWER OFF

The tape is rewound to its beginning, and then the cassette is ejected. Then the power is turned off.

REW — PLAY

The tape is rewound to its beginning and then is played back.

REW — TIMER REC

The tape is rewound to its beginning and then the VCR enters the standby mode for timer recording. This function is possible only when a timer recording has been preset.

AUTO MENU

By selecting [AUTO MENU] in the FUNCTION MEMORY menu, the AUTO MENU will be displayed immediately after FUNCTION MEMORY is pressed. This provides a quick access to the AUTO MENU.

Notes on "GO TO REC START — PLAY"

The memory of the recording start position will be erased and "GO TO REC START — PLAY" will not be operable in the following cases:

- You pressed **COUNTER RESET**.
- You ejected and inserted the cassette.
- You pressed **HIGH SPEED REWIND**.

Various Playback Modes

To obtain a still picture

During playback mode press **PAUSE/STILL** on the unit or **PAUSE** on the Commander. To resume normal playback, press **PLAY**, **PAUSE/STILL**, or **PAUSE**. When the pause mode lasts for more than 5 minutes, the unit will re-enter the playback mode automatically.

To search for a particular scene — Picture search

During playback mode, press **REW** or **FF**. While the button is pressed, a high speed picture without sound will appear on the TV screen. When the button is released, the unit will return to the previous mode.

To watch the picture in high speed — Locked picture search

During the playback mode, press **SEARCH** or **SEARCH** on the Commander. A high speed picture in forward or reverse will appear on the screen even when the button is released. To resume normal playback, press **PLAY**.

To watch slow motion playback

During playback mode, press **SLOW** on the Commander. Change the slow motion speed with the **+** or **-** buttons. Press **+** to increase the playback speed, and **-** to decrease the playback speed.

To see the picture momentarily while the unit is in the fast-forward or rewind mode without picture on the TV screen

During fast-forward mode, press **FF**. During rewind mode, press **REW**. The high speed playback picture can be seen as long as the button is pressed. Release the button to return to the previous mode.

To watch a playback picture at 2 times the normal speed

During playback mode, press **x2** on the Commander.

To watch reverse direction playback, slow and x2 picture

During forward playback of the desired mode, press **<** on the Commander. Press **PLAY** or **>** to resume forward playback.

To watch a frame-by frame picture

During still mode, press **>** to advance the picture one frame. Press **<** to reverse the picture one frame. Each press of **</>** will move the picture one frame. Press **PLAY** to resume normal playback.

To enjoy various playback by the SWING SHUTTLE dial

Various playback modes as illustrated can be selected with **SWING SHUTTLE** dial from any playback mode. The same speed is available in the reverse direction. Releasing the **SWING SHUTTLE** makes a still picture. To resume normal playback, press **PLAY**.



How to Adjust the Picture Manually in Various Playback Modes

If streaks or noise appear on a slow motion picture

Adjust the picture with the **TRACKING NORMAL/SLOW** and **STILL ADJUST** **▼/▲** buttons inside the front panel. The picture can be adjusted more easily by changing the speed closer to normal playback by pressing **SLOW +**.

If the picture appears to shake in the still mode

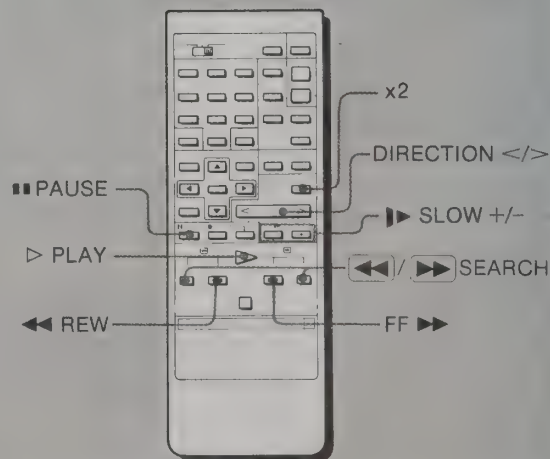
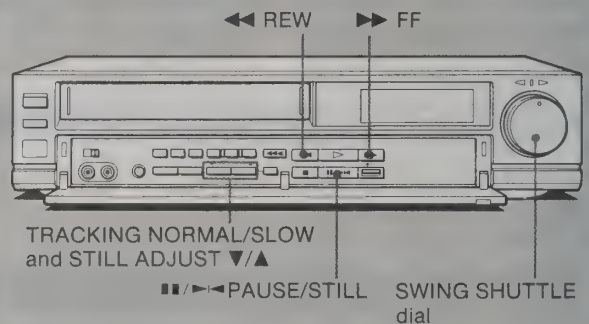
Adjust the picture with the **TRACKING NORMAL/SLOW** and **STILL ADJUST** **▼/▲** buttons inside the front panel until the picture stabilizes.

If a band appears on the top or bottom of the screen in still mode

Adjust the picture with the **TRACKING NORMAL/SLOW** and **STILL ADJUST** **▼/▲** buttons inside the front panel while playing back the tape in a slow motion.

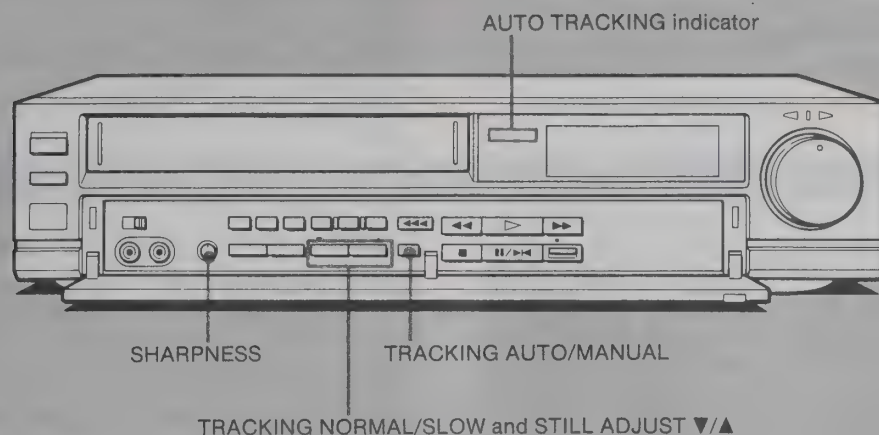
Note

Streaks or noise cannot be completely eliminated in the reverse direction playback or in reverse slow modes.



Playing Back a Tape Recorded on Another VCR

When playing back a tape recorded on another VCR, we recommend that you make the following adjustments to obtain a better picture.



Adjusting the sharpness

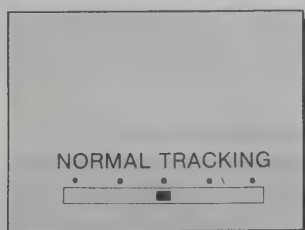
Turn the SHARPNESS control toward SHARP to obtain a sharper picture. Turn it toward SOFT to obtain a softer picture.

Adjusting the tracking

Automatic tracking adjustment

The tracking condition is automatically adjusted on this VCR. The AUTO TRACKING indicator blinks while the VCR is searching for the best tracking condition and lights when maximum playback picture is obtained. The automatic tracking control is activated in the following conditions:

- when the cassette is inserted and played back.
- when the recording mode on the playback tape is switched between SP and EP.
- when the picture is distorted by scratches etc. on the tape.
- when the AUTO TRACKING indicator is turned on by pressing TRACKING AUTO/MANUAL after the picture is adjusted manually. (See Manual tracking adjustment.)



Manual tracking adjustment

When the playback picture proves to have streaks or snow during normal playback, adjust the picture manually with TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲.

Press either ▼ or ▲ to obtain the best possible picture.

The tracking meter will appear on the TV screen and the AUTO TRACKING indicator will be turned off.

When the manual adjustment proves unsatisfactory, press both of the TRACKING NORMAL SLOW and STILL ADJUST ▼/▲. The tracking condition will return to the center position.

Notes

- Auto tracking adjustment may be impossible and the tracking indicator will not appear on the TV screen when the recording condition of the tape is poor.
- During auto tracking adjustment, streaks or noise may appear.
- When **DATA SCREEN** on the Commander is pressed, the tracking indicator will not appear on the TV screen.
- Auto tracking adjustment is not possible on the tapes recorded in LP mode.

Recording TV Programs

Before You Begin

Check the following points:

Check the connections

Make sure that the connections have been made correctly.

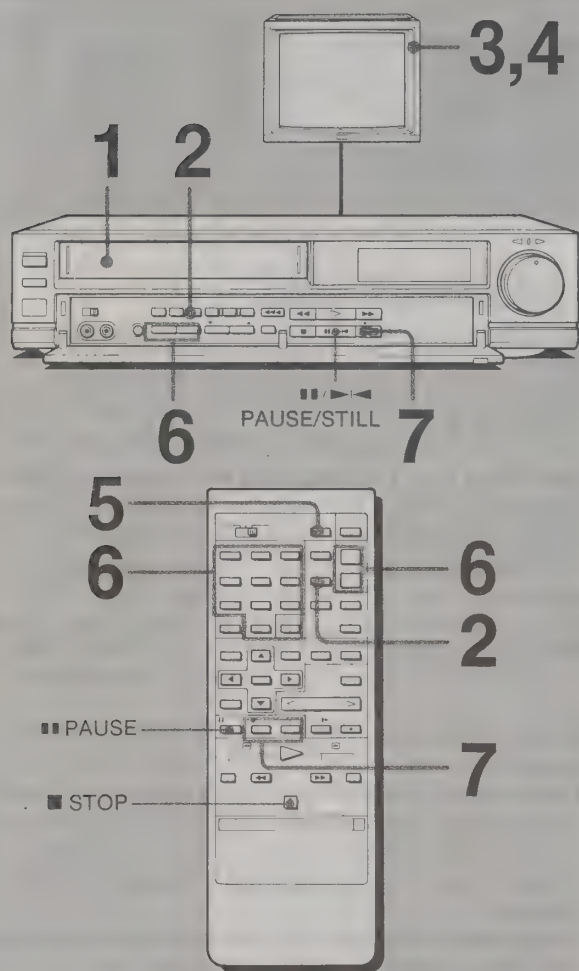
Check the positions of the selector

INPUT SELECT → TUNER

Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmission and/or program owner.

Operation



- 1 Insert a cassette.**
The VCR will turn on automatically (Auto power on).
- 2 Select the recording tape speed, SP or EP, with REC MODE.**
- 3 Turn on the TV.**
- 4 If your TV is equipped with video/audio input jacks**
Select the input for the VCR.
If your TV is not equipped with video/audio input jacks
Select the channel for the VCR (3 or 4.)
- 5 Press ANT TV/VTR so that the VTR indicator lights.**
Skip this step if the VCR is connected to the video/audio input jack of the TV.
- 6 Select the channel to be recorded with CHANNEL +/- or channel number buttons and ENTER.**
- 7 Press the two ● REC buttons simultaneously.**
There is only one ● REC button on the unit.
Recording starts.

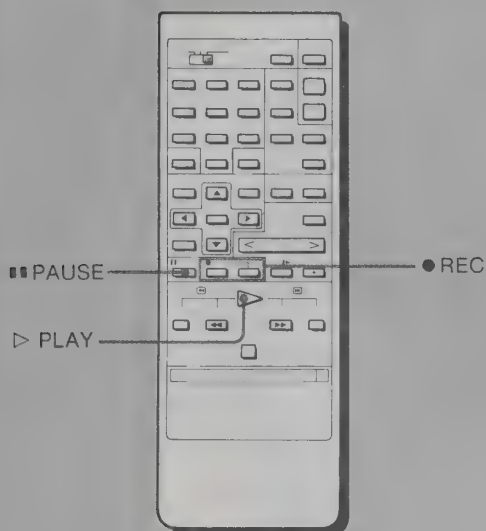
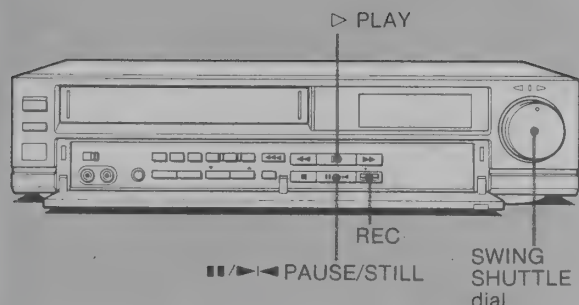
To stop recording
Press ■ STOP.

To stop the tape for a moment

Press ■/▶ PAUSE/STILL on the unit or ■■PAUSE.
To resume recording, press ■■/▶ PAUSE/STILL or ■■ PAUSE. When recording pause mode lasts for more than approximately 5 minutes, the unit enters the stop mode.

When the tape reaches its end

The tape will be rewound to the beginning and the power of the unit is retained.



Temporarily Stopping Recording at a Particular Point

Technique 1

You can stop recording when unwanted scene appears and resume recording smoothly.

- 1** Press **||| PAUSE/STILL** or **||| PAUSE** when an unwanted scene appears.
Recording will stop and the VCR will enter the recording pause mode.
- 2** Press **||| PAUSE/STILL** or **||| PAUSE** at the desired point to release the recording pause mode.
Recording will resume from the point set in step 1.

Technique 2

When an unwanted scene has already started to be recorded, you can return the tape to the desired point, have the SLV-353UC stand-by in the recording pause mode, and resume recording at the desired scene smoothly.

- 1** Set the VCR to the recording pause mode.
- 2** Turn the SWING SHUTTLE dial to the left and search for the point from which you wish to continue recording.
- 3** Release the SWING SHUTTLE dial at the desired point.
After an instant of STILL mode, the VCR will automatically enter the recording pause mode.
- 4** Press **||| PAUSE/STILL** or **||| PAUSE**.
Recording will resume.

To Record a Program without Watching the TV

Turn off the power of the TV or color monitor.
There will be no interference to the recording.

What the VTR indicator in the display window indicates during recording

VTR indicator	Picture on the TV screen
Lit	Channel selected by the VCR
Unlit	Channel selected by the TV

Watching One TV Program While Recording Another

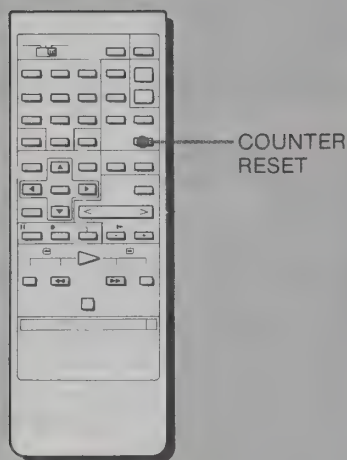
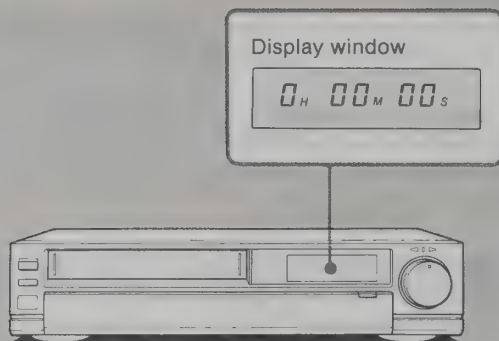
- 1** Press **ANT TV/VTR** so that the VTR indicator is turned off.
- 2** Select the channel you want to watch on the TV.

Note

If you are using a color monitor, you cannot watch another program during recording unless the monitor has an internal TV tuner.

Use of the Tape Counter

Indexing the Tape Contents



Before starting recording or playback, press COUNTER RESET to reset the counter to zero. By noting the counter reading at the desired point, you can easily find that point later by referring to the counter. Use the label on the cassette to list the programs and their counter readings.

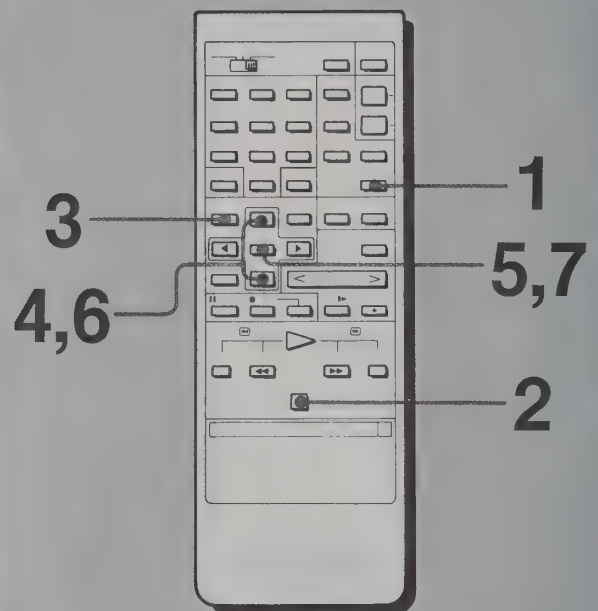
Note on counter reading

Even after a cassette is ejected, the counter reading is retained; however when a cassette is inserted again, the counter will return to "0H00M00S."

Tape Return/Tape Return Play

Tape return

Stops the tape at the counter zero point.



- 1** During playback or recording, press the **COUNTER RESET** at the point you want to locate later.
The tape counter will display "0H00M00S."

- 2** When recording or playback is completed, press **STOP**.

- 3** Press **MENU**.

MENU

- AUTO MENU
- TIMER SET/CHECK
- ▶ MODE SET
- TUNER PRESET
- FUNCTION MEMORY
- CLOCK SET
- DEMONSTRATION

- 4** Move the cursor to **AUTO MENU**.

MENU

- ▶ AUTO MENU
- TIMER SET/CHECK
- MODE SET
- TUNER PRESET
- FUNCTION MEMORY
- CLOCK SET
- DEMONSTRATION

- 5** Press **EXECUTE**.

AUTO MENU

- ▶ PLAY - REW - POWER OFF
- GO TO ZERO - STOP
- GO TO ZERO - PLAY
- GO TO REC START - PLAY
- REW - POWER OFF
- REW - EJECT - POWER OFF
- REW - PLAY
- REW - TIMER REC

- 6** Move the cursor to **GO TO ZERO — STOP**.

AUTO MENU

- PLAY-REW-POWER OFF
- ▶ GO TO ZERO - STOP
- GO TO ZERO - PLAY
- GO TO REC START - PLAY
- REW - POWER OFF
- REW - EJECT - POWER OFF
- REW - PLAY
- REW - TIMER REC

- 7** Press **EXECUTE**.
The tape will be rewound or advanced close to the counter zero point and stop.

GO TO ZERO - STOP

◀ EP 0:01:09

Tape return play

Starts playback automatically from the counter zero point.

- 1** Follow steps 1 to 5 in "Tape return."

- 2** Move the cursor to **GO TO ZERO — PLAY**.

AUTO MENU

- PLAY - REW - POWER OFF
- GO TO ZERO - STOP
- ▶ GO TO ZERO - PLAY
- GO TO REC START - PLAY
- REW - POWER OFF
- REW - EJECT - POWER OFF
- REW - PLAY
- REW - TIMER REC

- 3** Press **EXECUTE**.

GO TO ZERO - PLAY

◀ EP 0:01:40

Notes

- The tape counter does not work when the inserted tape has no recordings.
- There may be a difference of several seconds between the COUNTER ZERO position you have marked and the position detected by the VCR.

Timer Recording

You can preset up to eight recordings as much as one month in advance. The recordings can be preset with the Commander only while referring to the **TIMER SET/CHECK** menu on the TV screen.

Do not use any buttons on the unit even it has the same name.

Before You Begin

- The date and clock must be set correctly. (See "Date and Clock Setting.")
- Make sure that the cassette tape is long enough to record all the programs.
- Make sure that the safety tab on the cassette is not broken off. If you insert a cassette without its safety tab and press **TIMER REC ON/OFF**, the cassette will automatically be ejected.
- Turn on the VCR and the TV.

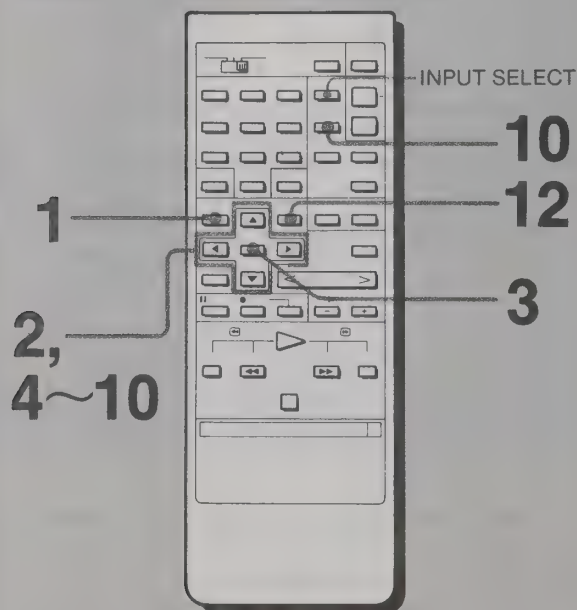
Recording from today to one month later

If today is August 31st, you can set the timer to record a program broadcast between today and September 30 (for 31 days). If today is January 31st, you can set the timer to record a program broadcast between today and February 28th (for 29 days). A leap year is automatically considered.

Timer Setting Example

Suppose you want record a program broadcast on channel 26 from 9:00 PM to 10:55 PM on Thursday August 3rd in SP mode.

Use ◀ and ▶ to select the items.
Use ▲ and ▼ to change the numbers.



Operation

1 Press MENU.

MENU

▶ AUTO MENU
TIMER SET/CHECK
MODE SET
TUNER PRESET
FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

2 Move the cursor to TIMER SET/CHECK.

MENU

AUTO MENU
▶ TIMER SET/CHECK
MODE SET
TUNER-PRESET
FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

3 Press EXECUTE.

The **TIMER SET/CHECK** menu will be displayed on the screen. When the clock is not set properly, a short beep alerts you. Return to "Date and Time Setting" section to reset the clock.

TIMER SET/CHECK	7/28	FRI
DATE	ON	OFF
▶ 1/---	---	---
2/---	---	---
3/---	---	---
4/---	---	---
5/---	---	---
6/---	---	---
7/---	---	---
8/---	---	---
9/---	---	---
10/---	---	---
11/---	---	---
12/---	---	---

- 4 Press ►.**
Make sure that today's date is flashing. If not, set the correct time. (See "Date and Time Setting.")

TIMER	SET/CHECK	7/28	FRI	
DATE	ON	OFF	CH	
7/28	FRI	-	-	EP
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-

- 10 Press ► to flash the recording speed position. Press ▲ or ▼ to select the tape speed, SP or EP.**
REC MODE can also be used.

TIMER	SET/CHECK	7/28	FRI	
DATE	ON	OFF	CH	
8/3	THU	PM 9:00	10:55	26 SP
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-

- 5 Press ▲ to set the month and date to 8/3 THU.**
The day of the week is automatically set.

TIMER	SET/CHECK	7/28	FRI	
DATE	ON	OFF	CH	
8/3	THU	-	-	EP
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-

- 11 Press ► to store the setting.**
When all of the settings stop flashing with a ► on the left most position indicates that this setting has been completed.

TIMER	SET/CHECK	7/28	FRI	
DATE	ON	OFF	CH	
8/3	THU PM 9:00	10:55	26	SP
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-

- 6 Press ► to flash the hours section under "ON" then ▲ until PM:9 appears.**

TIMER	SET/CHECK	7/28	FRI	
DATE	ON	OFF	CH	
8/3	THU PM 9	-	-	EP
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-

- 12 Press EXECUTE.**
Press **TIMER REC ON/OFF** to enter the recording stand-by mode.

- 7 Press ► to flash minute section under "ON" then ▲ or ▼ until 00 appears.**

TIMER	SET/CHECK	7/28	FRI	
DATE	ON	OFF	CH	
8/3	THU PM 9:00	-	-	EP
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-

- 8 Press ►.**
The on-time will blink under "OFF." Set the turn-off time referring to steps 6 and 7. If you went past the desired turn-off time, press ▼ to go back instead of ▲. Pressing ▲ will advance the setting to 12 hours later than the desired turn-on time.

TIMER	SET/CHECK	7/28	FRI	
DATE	ON	OFF	CH	
8/3	THU PM 9:00	10:55	-	EP
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-

- 9 Press ► to flash the CH position.**
Press ▲ or ▼ until 26 appears.
Only the channels preset in the VCR will appear. Channel number buttons can also be used.

TIMER	SET/CHECK	7/28	FRI	
DATE	ON	OFF	CH	
8/3	THU PM 9:00	10:55	26	EP
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-
-/-	-	-	-	-

To preset another program

Move the cursor to the second line after step 11 and repeat steps 4 to 11.

To record video sources from LINE 1 or 2 jacks

Press INPUT SELECT during steps 4 to 11 to call up LINE 1 or 2 under the "CH" position. The indication will return to channel numbers on the third press.

Problem when TIMER REC ON/OFF is pressed

The cassette is ejected automatically.	The safety tab on the inserted cassette has been removed.
The TIMER REC indicator does not appear.	<ul style="list-style-type: none"> No cassette has been inserted. The tape is at its end.

If a power interruption occurs

- If a power interruption lasting less than approximately three hours occurs while the VCR is waiting for the preset time, the VCR will re-enter the timer recording standby mode.
- If a power interruption lasting more than approximately three hours occurs before a timer recording, the memory will be cleared. Reset the date and time for timer recording.
- If a power interruption lasting less than approximately three hours occurs during a timer recording, the VCR will start recording again and the tape counter will indicate "0H00M00S."

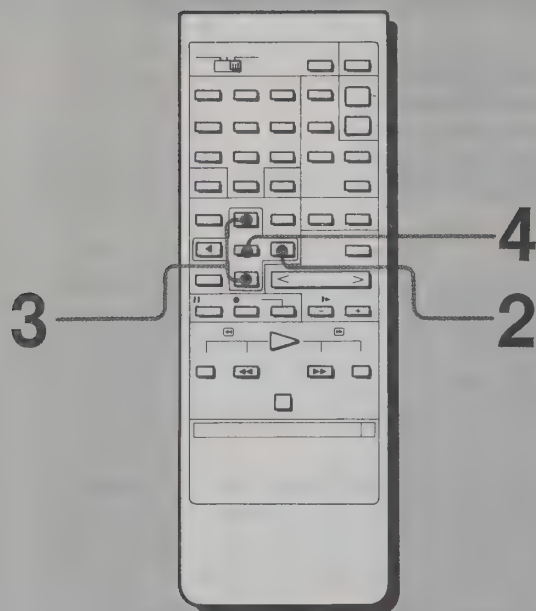
Every Week and Every Day Recording

Weekly or daily timer recording can be set on this VCR. This function is convenient if, for example, you wish to record the same program on the same day of the week.

Operation

Use ▲ or ▼ to move the cursor and to change the items.

Use ◀ or ▶ to make the desired items blink.



- 1 Follow steps 1 to 3 in "Timer Recording" (page 38).

TIMER	SET/CHECK	8/4	FRI
DATE	ON	OFF	CH
▶-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-

- 2 Press ▶ to make the DATE position blink.

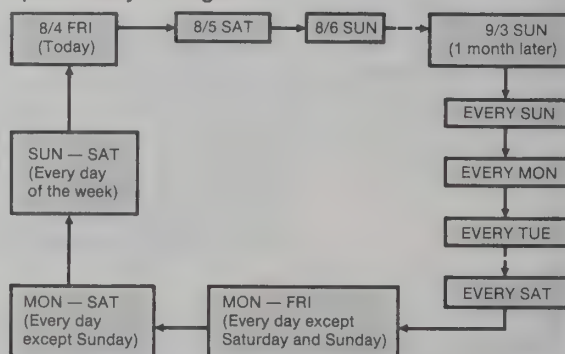
TIMER	SET/CHECK	8/4	FRI
DATE	ON	OFF	CH
8/4 FRI	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-

- 3 Change the indication under DATE.

Each press of ▲ changes the indication as follows. ▼ changes the indication in the reverse direction.

TIMER	SET/CHECK	8/4	FRI
DATE	ON	OFF	CH
▶EVERY SAT	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-

Example: Today is August 4th.

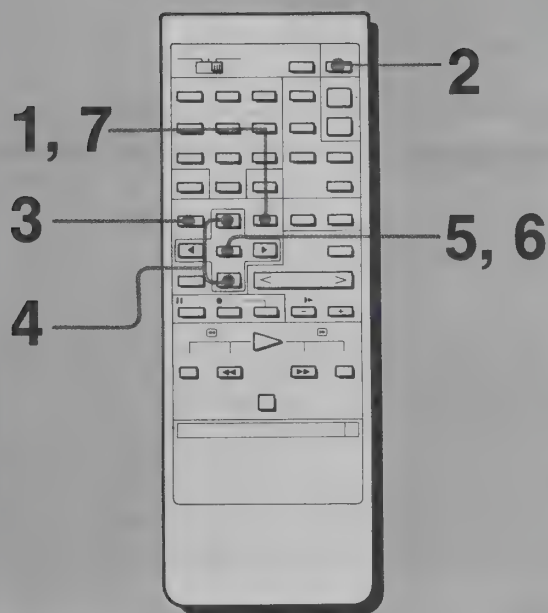


- 4 Follow steps 6 to 12 in "Timer Recording" (page 39).

To Check Timer Settings

You can display all of the timer settings on the TV screen to check the settings.

Press ▲ or ▼ to move the cursor.



1 Press **TIMER REC ON/OFF** to turn off the **TIMER REC** indicator in the display window.

2 Press **POWER**.

3 Press **MENU**.

MENU

► **AUTO MENU**
TIMER SET/CHECK
 MODE SET
 TUNER PRESET
 FUNCTION MEMORY
 CLOCK SET
 DEMONSTRATION

4 Move cursor to **TIMER SET/CHECK**.

MENU

AUTO MENU
 ► **TIMER SET/CHECK**
 MODE SET
 TUNER PRESET
 FUNCTION MEMORY
 CLOCK SET
 DEMONSTRATION

5 Press **EXECUTE**.
 The **TIMER SET/CHECK** menu appears.

TIMER	SET/CHECK	8/4	FRI
DATE	ON	OFF	CH
►8/4	FRI	AM 7:00 8:00	12 SP
8/15	TUE	PM12:00 2:15	LINE2 EP
9/3	SUN	PM 1:00 2:00	LINE1 SP
MON - FRI	PM11:00 11:15	6	EP
MON - SAT	AM 8:15 8:30	15	SP
SUN - SAT	PM 9:00 11:00	10	EP
EVERY SAT	PM 8:00 8:54	8	EP
8/27	SUN	AM10:00 12:00	50 SP

6 Press **EXECUTE** to return to original screen.

7 Press **TIMER REC ON/OFF** to return to the timer recording stand-by mode.

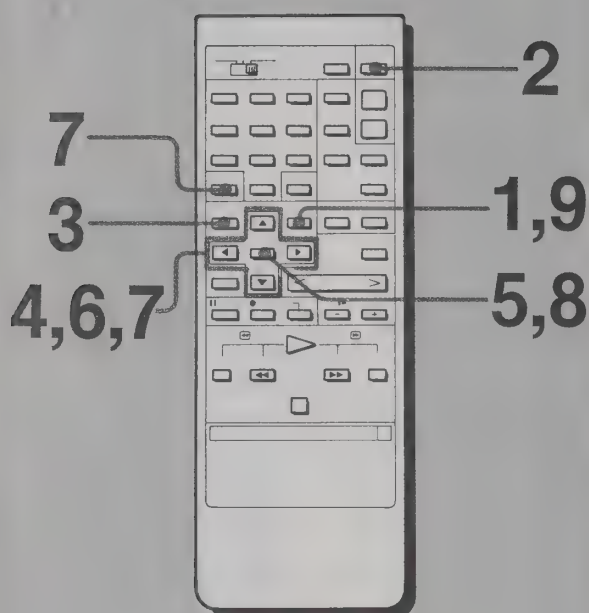
The **TIMER/SET CHECK** menu

When a recording is set for only one day, that program will be erased from the **TIMER SET/CHECK** menu after the recording is over.

To Change or Cancel the Timer Settings

The timer settings can be changed or canceled by referring to the TIMER SET/CHECK menu.

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to change the blinking positions.



1 Press **TIMER REC ON/OFF** to turn off the **TIMER REC** indicator in the display window.

2 Press **POWER**.

3 Press **MENU**.

MENU

- ▶ AUTO MENU
- TIMER SET/CHECK
- MODE SET
- TUNER PRESET
- FUNCTION MEMORY
- CLOCK SET
- DEMONSTRATION

4 Move the cursor to **TIMER SET/CHECK**.

MENU

- AUTO MENU
- ▶ **TIMER SET/CHECK**
- MODE SET
- TUNER PRESET
- FUNCTION MEMORY
- CLOCK SET
- DEMONSTRATION

-
- 5** Press EXECUTE.
TIMER SET/CHECK menu appears.

TIMER	SET/CHECK	8/4	FRI
DATE	ON	OFF	CH
►8/4	FRI AM 7:00	8:00	12 SP
8/15	TUE PM12:00	2:15	LINE2 EP
9/3	SUN PM 1:00	2:00	LINE1 SP
MON - FRI	PM11:00	11:15	6 EP
MON - SAT	AM 8:15	8:30	15 SP
SUN - SAT	PM 9:00	11:00	10 EP
EVERY	SAT PM 8:00	8:54	8 EP
8/27	SUN AM10:00	12:00	50 SP

-
- 6** Move the cursor to the program you wish to change or cancel.

TIMER	SET/CHECK	8/4	FRI
DATE	ON	OFF	CH
8/4	FRI AM 7:00	8:00	12 SP
►8/15	TUE PM12:00	2:15	LINE2 EP
9/3	SUN PM 1:00	2:00	LINE1 SP
MON - FRI	PM11:00	11:15	6 EP
MON - SAT	AM 8:15	8:30	15 SP
SUN - SAT	PM 9:00	11:00	10 EP
EVERY	SAT PM 8:00	8:54	8 EP
8/27	SAT AM10:00	12:00	50 SP

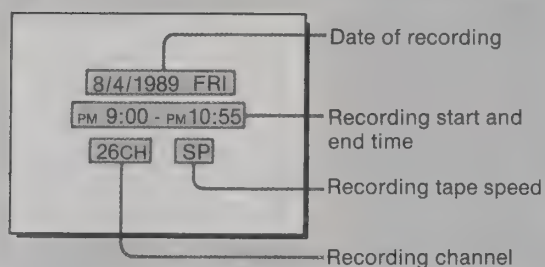
-
- 7** To cancel it, press TIMER CLEAR.
To change it, make the item to be changed blink by pressing ◀ or ▶ and make the necessary changes by pressing ▲ or ▼.

-
- 8** Press EXECUTE to store the changes and to return to the original screen.

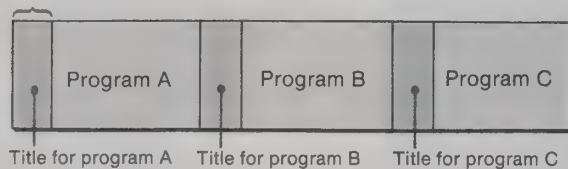
-
- 9** Press TIMER REC ON/OFF to return to the timer recording stand-by mode.
-

Recording a Timer Title

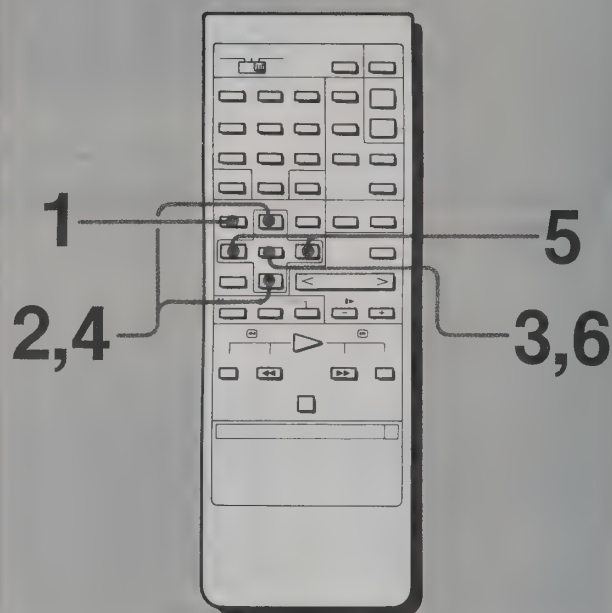
A timer title, consisting of recording information given in the illustration, can be recorded at the beginning of a recorded program. The VCR will be automatically turned on 20 seconds prior to the preset timer recording time and the timer title screen will be recorded for 3 seconds. Then the VCR will enter the recording pause mode and start recording at the preset time. This function is convenient when searching for a certain program on a tape on which several programs have been recorded. The timer title will automatically be recorded when a timer recording is made. If you wish to record without the timer title, change the setting by the following operations.



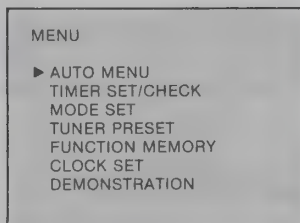
3 seconds



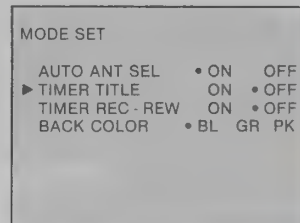
Operation



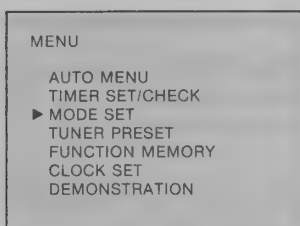
1 Press MENU.



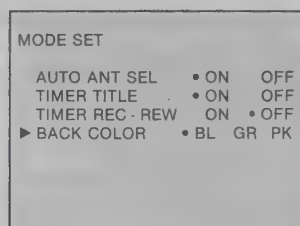
5 Select OFF to record without a timer title.



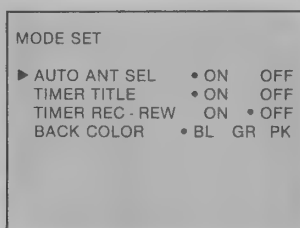
2 Move cursor to MODE SET.



6 Move cursor to BACK COLOR and select the background color; BL for blue, GR for green, or PK for pink.

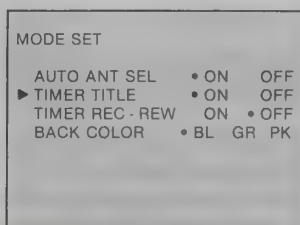


3 Press EXECUTE. MODE SET menu appears.



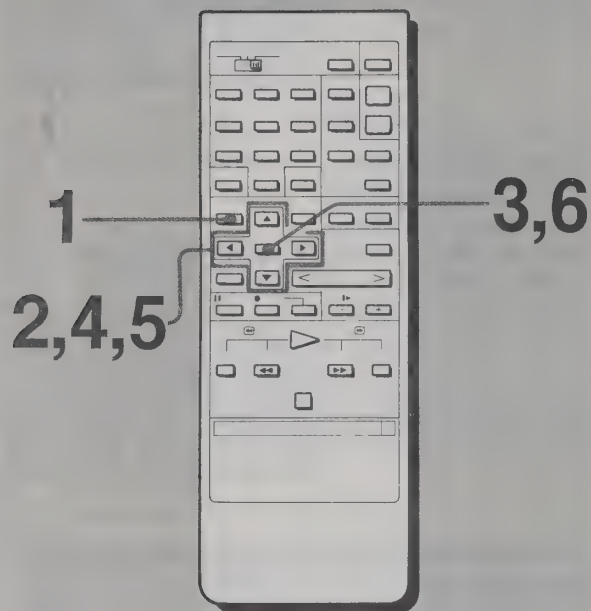
7 Press EXECUTE to enter the setting and to return to the original screen.

4 Move cursor to TIMER TITLE.



To Rewind the Tape Automatically after Timer Recording

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to select the items.



1 Press MENU.

MENU

▶ AUTO MENU
TIMER SET/CHECK
MODE SET
TUNER PRESET
FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

2 Move cursor to MODE SET.

MENU

AUTO MENU
TIMER SET/CHECK
▶ MODE SET
TUNER PRESET
FUNCTION MEMORY
CLOCK SET
DEMONSTRATION

3 Press EXECUTE. The MODE SET menu appears.

MODE SET

▶ AUTO ANT SEL • ON OFF
TIMER TITLE • ON OFF
TIMER REC - REW ON • OFF
BACK COLOR • BL GR PK

4 Move cursor to TIMER REC — REW.

MODE SET

AUTO ANT SEL • ON OFF
TIMER TITLE • ON OFF
▶ TIMER REC - REW ON • OFF
BACK COLOR • BL GR PK

5 Select ON.

MODE SET

AUTO ANT SEL • ON OFF
TIMER TITLE • ON OFF
▶ TIMER REC - REW • ON OFF
BACK COLOR • BL GR PK

6 Press EXECUTE to store the setting and to return to the original screen.

When timer recording is finished, the VCR will automatically rewind the tape to the beginning of that program.

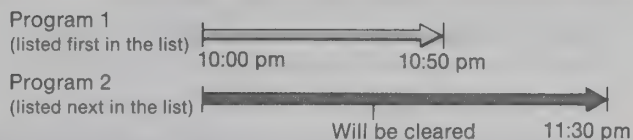
Notes

- If you have set more than one timer recording, the TIMER REC — REWIND function will not be activated until all of the recording is completed.
- If the tape reaches its end during timer recording, the tape will be rewound to the recording start point and the power will be turned off.

When Preset Timer Recordings Overlap

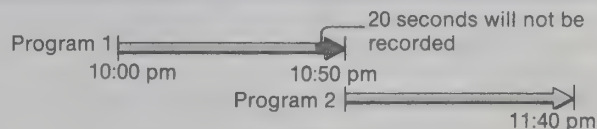
If the turn-on time of two programs are the same

The program listed first on the program list has priority over the other programs. The timer recording parameters of lower priority programs will be erased from the PROGRAM LIST when recording is over.



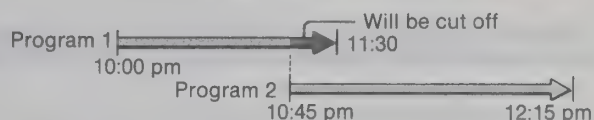
If the recording start time of program 2 is the same as the recording end time of program 1

The last 20 seconds of program 1 will not be recorded.



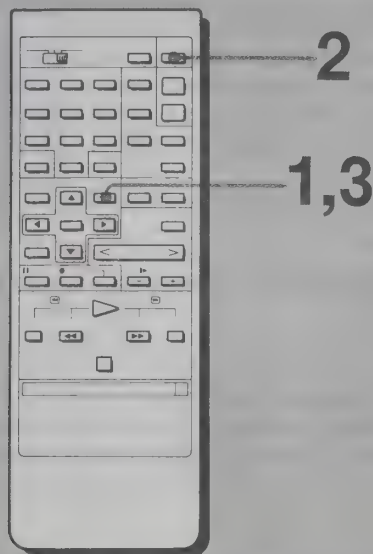
If the recording start time of program 2 comes before recording of program 1 is over

The recording of program 2 will begin before program 1 is finished.



Using the VCR before Timer Recording Starts

If you want to use the VCR when it is in the timer recording standby mode, you must first turn off the TIMER REC indicator in the display window and get out of the timer recording standby mode.



1 Press **TIMER REC ON/OFF** so that the **TIMER REC** indicator in the display window is turned off.

2 Turn on the power of the VCR.
Now the VCR is ready to be used.

3 After using the VCR, press **TIMER REC ON/OFF** to return to the timer recording standby mode and to light the **TIMER REC** indicator.

After Entering the Timer Recording Stand-by Mode

Automatic power on

The VCR is automatically turned on when the set time comes and starts recording. When it completes recording, the power is automatically turned off.

To stop recording activated by the timer

Press **TIMER REC ON/OFF**.

Buttons which can be operated during timer recording

- **TIMER REC ON/OFF**
- **COUNTER RESET** (See "Use of the Tape Counter.")
- **ANT TV/VTR** (See "Watching One TV Program While Recording Another.")
- **DATA SCREEN** (See "Playing a Tape — About the Data Screen.")
- **INDEX MARK** (See "Index Function.")
- **TIMER SET/CHECK** (For checking the programs only. See "To Check Timer Settings.")

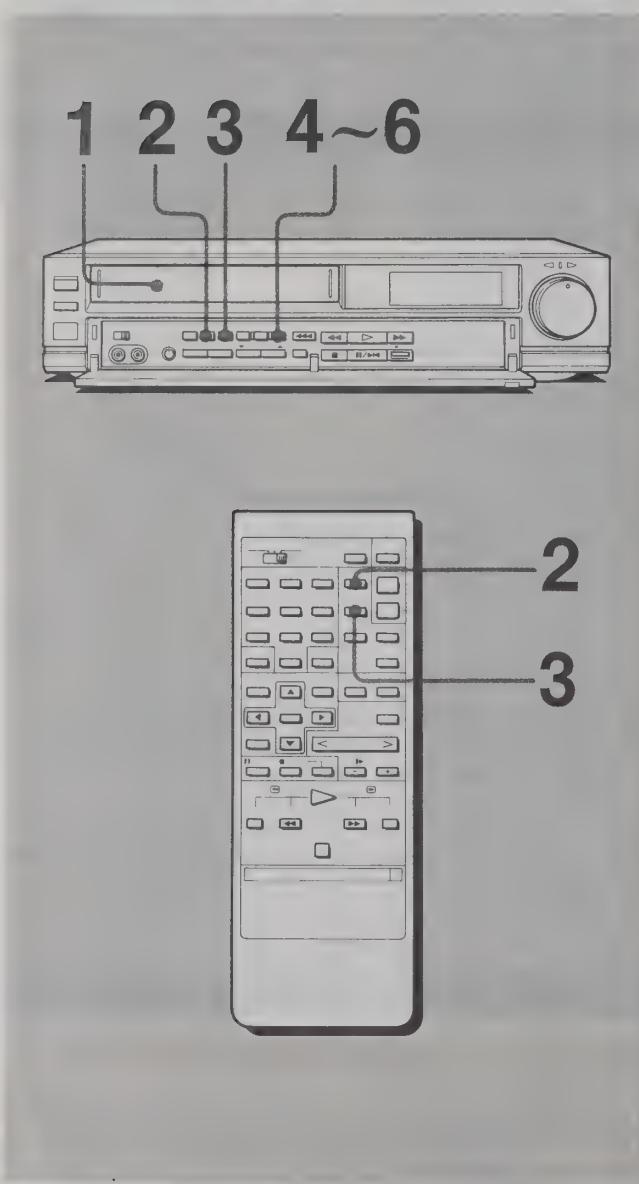
Quick Timer Recording

This function is convenient when, for example, you want to set the VCR to start recording immediately without going through the whole timer setting procedure. However, the quick timer recording function only provides a very rough setting for the desired program.

Before You Begin

- Press **TIMER REC ON/OFF** if the **TIMER REC** indicator is turned on.
- If you are currently recording, perform step 6 only.

Operation



1 Insert a cassette.

2 Press **INPUT SELECT** so that the **TUNER** indicator is turned on.

3 Press **REC MODE** to decide the tape speed, **SP** or **EP**.

4 Press **QUICK TIMER** on the **VCR**.
Select the channel for recording with **CHANNEL +/-** or channel number buttons and **ENTER** while the channel display is blinking.

5 Press **QUICK TIMER** again to start recording.

6 To decide the recording duration, press **QUICK TIMER** to change the duration indicator.
Every press of **QUICK TIMER** increases the recording duration in units of 30 minutes, up to 8 hours.

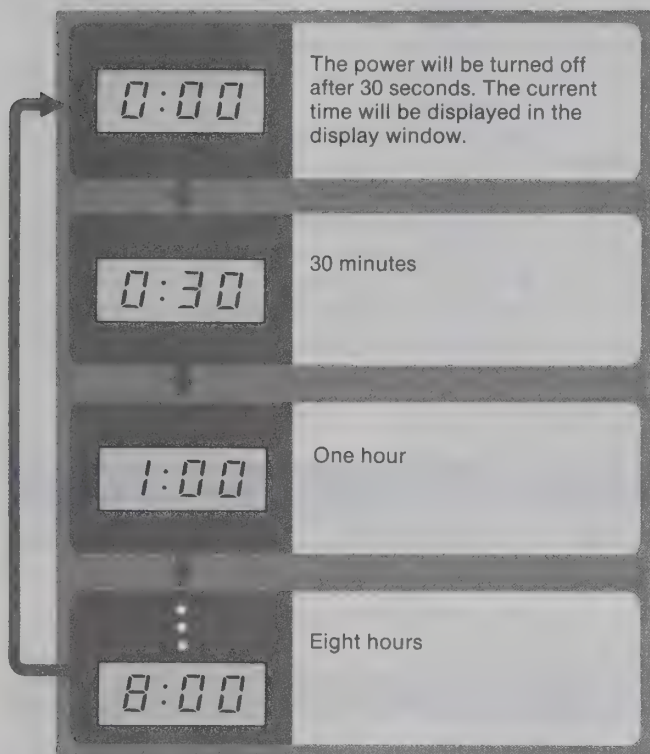
You can leave your VCR after turning off the TV. The VCR will automatically be turned off when the recording is finished.

If a cassette without its safety tab is inserted

The cassette will be ejected automatically when you press **QUICK TIMER**.

Recording Duration Indicator

Every time you press QUICK TIMER, the recording duration indicator will change as shown in the illustration. The recording duration can be changed by pressing QUICK TIMER even during quick timer recording. The duration indicator counts down the recording time minute by minute during recording.



Buttons Operable during Quick Timer Recording

PAUSE	To stop quick timer recording momentarily.
TIMER REC ON/OFF	To stop quick timer recording.
QUICK TIMER	To change recording duration.
COUNTER RESET	To reset the tape counter to zero.
INDEX MARK	To mark an index signal.
ANT TV/VTR	To watch the picture broadcast on another channel.
MENU	Only operable to check the timer recording settings. (See "To Check Timer Settings.")

If the tape runs out during quick timer recording

Recording will stop and the power will be turned off. The tape will not be rewound automatically.

If a power interruption occurs during quick timer recording

Recording will stop and the power will be turned off. If the power interruption lasts less than three hours and the power is restored before the recording end time, recording will start again from that point.

Index Function

A particular program can be easily located by an index signal marked on the tape.

To Mark Index Signals

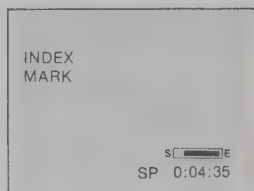
The INDEX indicator blinking in the display window and the INDEX MARK display on the screen show that an index signal has been marked.

Automatic index mark

An index signal is automatically marked at the beginning of recording.

Manual index mark

Index signals can be marked at any desired point during any recording or normal playback. Press INDEX MARK to mark an index signal.

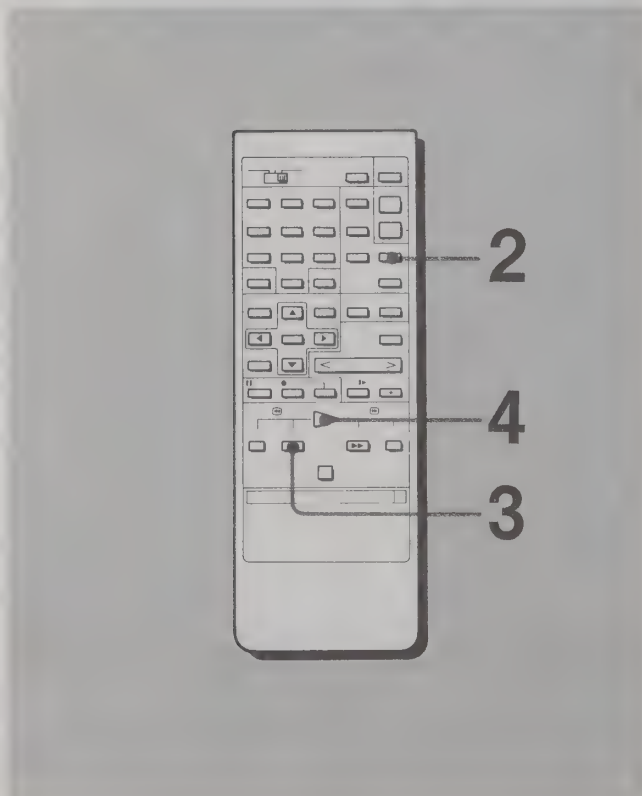


Notes

- Leave an interval of more than 2 minutes between index signals when marking them one after the other so that the VCR can detect them correctly.
- While an index signal is being marked during playback, the recorded sound will not be heard, but it will not be erased.
- You cannot mark an index signal in the following cases:
 - On a tape without its safety tab.
 - On an unrecorded portion of a tape.
 - Immediately before a point on the tape where the tape speed (EP or SP) changes.
 - When playing back a tape recorded in LP mode.

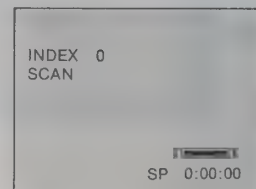
Index Scan

The beginning of each program can be found and played back by using the index signals.

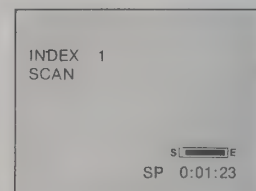


1 Insert a cassette with index signals.

- 2 Press INDEX once.**
The INDEX or SCAN indicator blinks alternately in the display window.



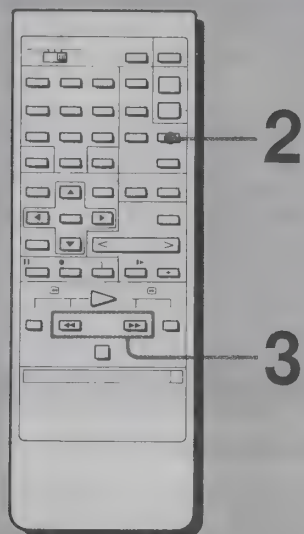
- 3 To scan the previous programs, press ◀ REW. To scan the programs ahead, press ▶ FF.**
The INDEX SCAN indicator will blink continuously while scanning. The tape will be rewound or rapidly advanced to the next marked index signal. The tape will be played back for approximately 10 seconds from the index signal, and then be rewound or advanced to the next index signal. Every time an index signal is detected and playback begins, the displayed index number will increase.



- 4 When the desired program is detected, press ▷ PLAY.**
Playback will start from that point.

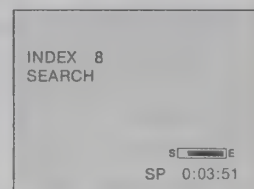
Index Search

A particular program can be located and be played back by designating how many index signals ahead or behind that program is from the current position. Up to 19 indexes can be searched for.

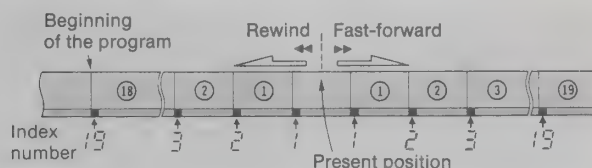
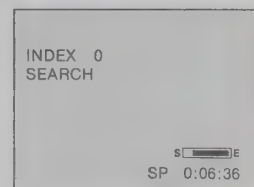


1 Insert a cassette with index signals.

- 2 Press INDEX until the index number of the desired program is displayed.**
The INDEX indicator and the INDEX SEARCH number will light up in the display window.

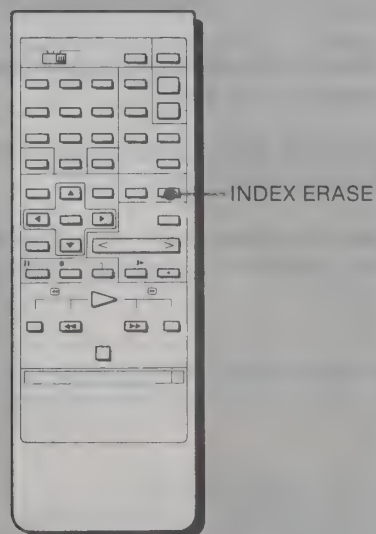


- 3 To locate a previous program on the tape, press ◀ REW. To locate a program ahead, press ▶▶ FF.**
The tape will be rewound or rapidly advanced. Every time an index signal is detected, the INDEX SEARCH number will decrease. When the number reaches 0, playback of your desired program will begin.

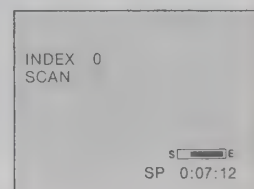


Erasing Index Signals

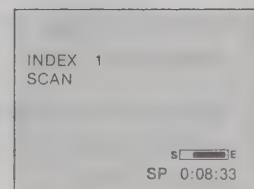
Unnecessary index signals can be erased.



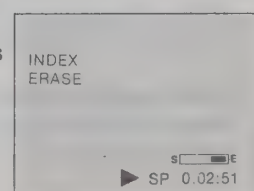
1 Press INDEX once.



- 2 Press ◀ REW or ▶▶ FF.**
The tape will be rewound or rapidly advanced. Every time an index signal is detected, the tape will be played back and then rewound or advanced to the next index signal.



- 3 When you reach the index signal you wish to erase, press ERASE within approximately 10 seconds after you have verified the playback picture.**
While the index signal is being erased, the recorded sound will not be heard, but it will not be erased from the tape.



Using an additional VCR, you can create your own video program tapes.

Before You Begin

When using the SLV-353UC as the recording VCR

Before editing, check these settings:

- **INPUT SELECT:** Select LINE 1 or LINE 2, whichever the playback VCR is connected to.
- **REC MODE:** Select SP or EP.
- **EDIT indicator:** Press EDIT to light the EDIT indicator.

When using the SLV-353UC as the playback VCR

Before editing, check the setting:

- **EDIT indicator:** Press EDIT to light the EDIT indicator.

Caution

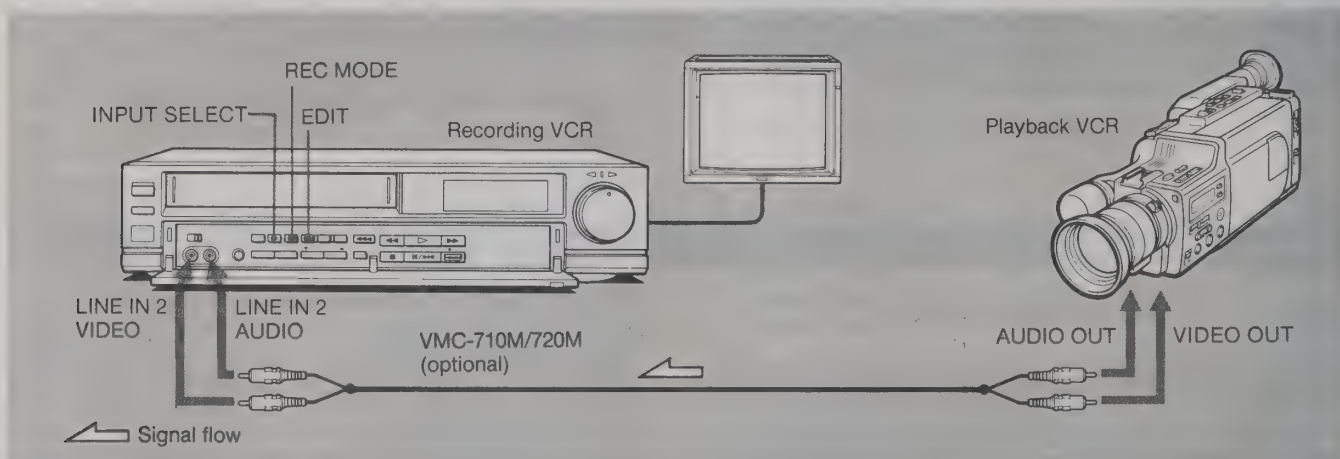
Television programs, films, video tapes and other materials may be copyrighted. Unauthorized duplication of such material may be contrary to the provisions of the copyright laws.

Use of the EDIT button

Even when using the EDIT mode during editing, the quality of the edited tape will have a certain amount of deterioration in picture and sound. Please avoid using an edited tape for multiple generations of editing.

Editing with a VCR without a Sony Control Terminal

Using this VCR as the recording VCR and a 8 mm Video Camera Recorder as the player



- 1 Insert a tape for recording into the recording VCR.
- 2 Turn on the power of the playback VCR and insert a source tape.
- 3 Activate the EDIT mode on the recording VCR. Activate the EDIT mode on the playback VCR if it has this function.
- 4 Search for the playback start point and enter the playback pause mode.
- 5 Search for the recording start point and enter the recording pause mode.
- 6 Press the PAUSE button on both of the units. Recording of the signals from the playback VCR will start.

When editing is completed

Press the STOP button on both of the VCRs.

When pressing PAUSE

Press the PAUSE button on the playback VCR a little before pressing the one on the recording VCR.

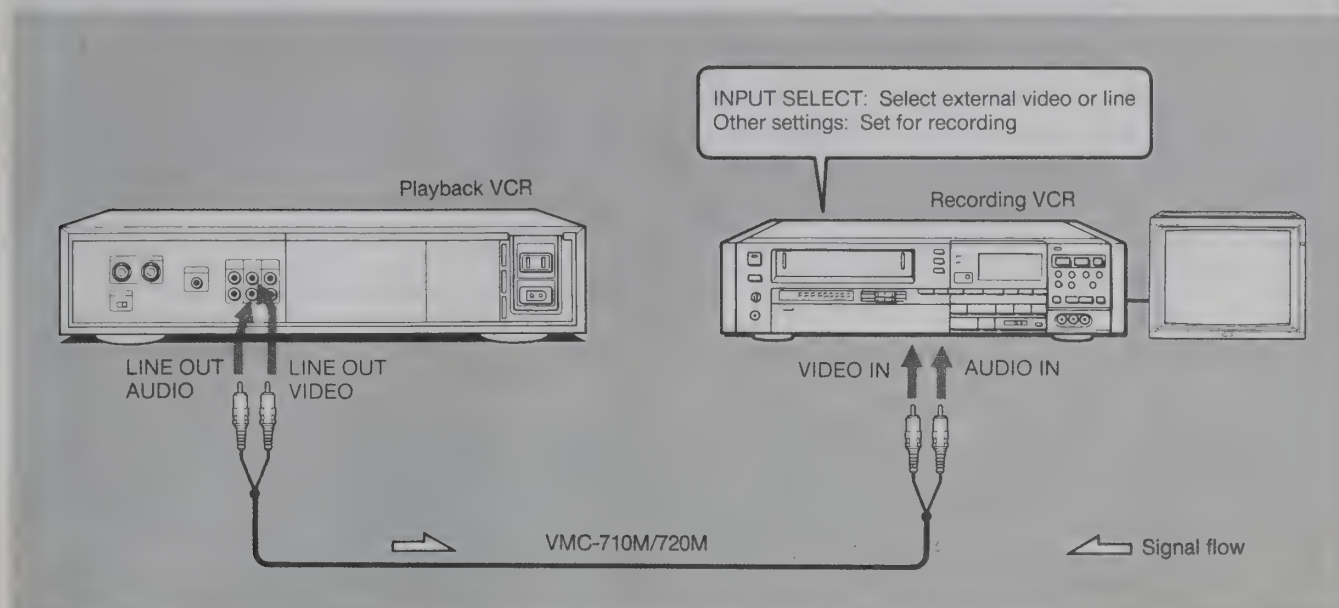
When the recording VCR is a stereo unit

Make connections with the optional VMC-901MS/920MS cable.

When connecting the VCRs

Do not connect both LINE IN and LINE OUT jacks on the two VCRs simultaneously. Doing so may cause a humming noise.

Using this VCR as the playback VCR and a Betamax VCR as the recording VCR



- 1** Turn on the power of the recording VCR and insert a tape for recording.
- 2** Insert a source tape into the playback VCR.
- 3** **Activate the EDIT mode on the playback VCR.**
Activate the EDIT mode on the recording VCR if it has this function.
- 4** Search for the playback start point and enter the playback pause mode.
- 5** Search for the recording start point and enter the recording pause mode.
- 6** Press the PAUSE button on both of the units.
Recording of the signals from the playback VCR will start.

When editing is completed

Press the STOP button on both of the units.

When pressing PAUSE

Press the PAUSE button on the playback VCR a little before pressing the one on the recording VCR.

When the recording VCR is a stereo unit

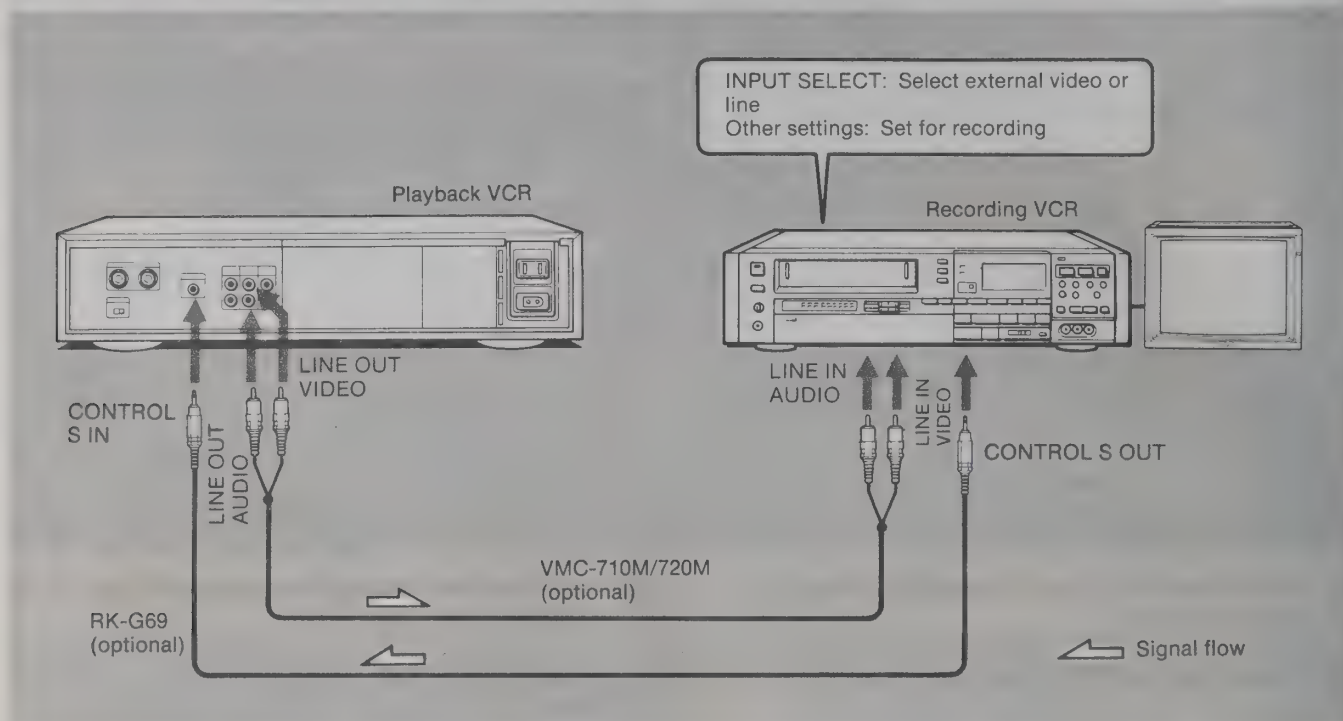
Make connections with the optional VMC-910MS/920MS cable.

When connecting the VCRs

Do not connect both LINE IN and LINE OUT jacks on the two VCRs simultaneously. Doing so may cause a humming noise.

Editing with a VCR with a Control S Out Terminal

Using this VCR as the playback VCR and another VCR with a Control S OUT terminal as the recording VCR



- 1** Turn on the power of the recording VCR and insert a tape for recording.
- 2** Insert a source tape into the playback VCR.
- 3** Activate the **EDIT** mode on the playback VCR. Activate the EDIT mode on the recording VCR if it has this function.
- 4** Search for the edit start point and enter the recording pause mode.
- 5** Search for the playback start point and enter the recording pause mode.
- 6** Press **SYNCHRO EDIT** on the recording VCR. Recording of the playback signal will start.
- 7** At the desired edit end point, press **SYNCHRO EDIT** on the recording VCR. The recording VCR will enter the recording pause mode and the playback VCR will enter the playback pause mode.

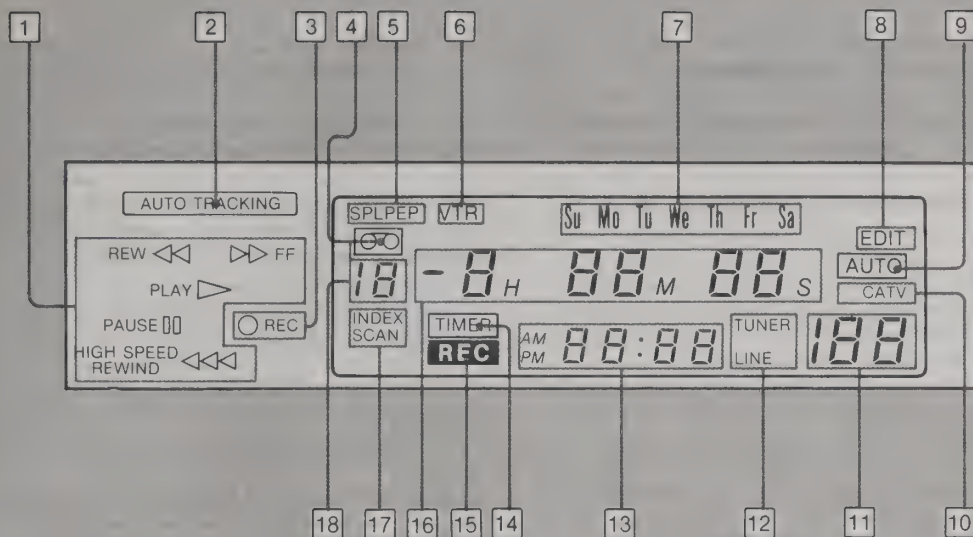
To edit the next scene
Repeat steps 3, 5 and 6.

When editing is completed
Press the STOP button on both of the units.

When the recording VCR is a stereo unit
Make connections with the optional cable VMC-901MS/920MS.

When connecting the VCRs
Do not connect both LINE IN and LINE OUT jacks on the two VCRs simultaneously. Doing so may cause a humming noise.

Indications in the Display Window



1 Tape operation indicator

2 **AUTO TRACKING** indicator
Blinks while the VCR is searching for the best tracking condition and lights when the best tracking condition is obtained.

3 **REC (recording)** indicator

4 **Cassette** indicator

5 **Tape speed** indicator
LP is only for playback.

6 **VTR** indicator

7 **Day of the week** indicator

8 **EDIT** indicator

9 **Automatic function** indicator

10 **CATV** indicator

11 **Channel/input mode number** indicators

12 **Input mode** indicators

13 **Current time**

14 **TIMER recording** indicator
Appears while the VCR is performing timer-recording, is waiting for the turn-on time of timer recording, or is performing quick timer recording.

15 **REC (recording)** indicator
Appears while the unit is performing normal recording, timer recording, or is waiting for the turn-on time of timer-recording, or is performing quick timer recording.

16 **Linear time counter**

17 **INDEX, INDEX SCAN** indicator

18 **INDEX number** indicator

Troubleshooting

If any difficulty should arise during operation, first check the power cord connection, then go through the following list. Should the difficulty persist, unplug the unit, and contact your Sony dealer or local authorized Sony service facility.

	Symptom	Possible causes and remedies
Power	The POWER switch does not function.	<ul style="list-style-type: none"> The power cord is disconnected. The VCR is in the timer recording standby mode.
	The power is turned off.	<ul style="list-style-type: none"> The safety device on the VCR has activated. Turn the power off, disconnect the power cord from the wall outlet and leave the unit for more than 1 minute.
Clock and timer	The clock has stopped and "AM 12:00" is blinking.	<ul style="list-style-type: none"> There has been a power interruption. Reset the date, clock time, and timer setting.
TV reception	TV program is not clearly displayed on the TV screen.	<ul style="list-style-type: none"> The channel for the VCR is not correctly tuned on the TV receiver. The TV signal is weak. Adjust the direction of the antenna. The AC power cord of the VCR is disconnected.
Recording and playback	Noisy picture during recording	<ul style="list-style-type: none"> The TV's channel is not set to that preset for the VCR. The TV signal is weak. Adjust the direction of the antenna.
	No picture on the TV screen	<ul style="list-style-type: none"> Press TV/VTR so that the VTR indication appears in the display window. The TV's channel is not set to 3 CH or 4 CH, or the video input has not been selected at the monitor.
	Recording cannot be made.	<ul style="list-style-type: none"> No cassette has been inserted. The tape is at its end. INPUT SELECT is not set correctly.
	The playback picture is not clear.	<ul style="list-style-type: none"> The channel for the VCR is not correctly tuned on the TV. A tape recorded on another VCR is being played back. Adjust the tracking with TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲. The video heads are dirty. Clean the heads using the Sony T-25CL video head cleaning cassette. For details on cleaning, refer to the instructions furnished with the cleaning cassette. If the cleaning cassette is not available in your area, have the heads cleaned at your nearest Sony facility. (Do not use a commercially available wet-type cleaning cassette. It may damage the video heads.) The video heads are worn out. Adjust SHARPNESS.
	The picture moves vertically during picture search mode.	<ul style="list-style-type: none"> Adjust the vertical hold control on the TV or color monitor.
	Distorted or noisy sound	<ul style="list-style-type: none"> Recording level was not properly adjusted.

	Symptom	Possible causes and remedies
Recording and playback	Sound drop-out	<ul style="list-style-type: none"> • The tape is defective. • Use a new video cassette tape.
Timer recording	Timer setting cannot be made.	The current time has not been preset.
	The TIMER REC indicator is not lit even though you've pressed TIMER REC ON/OFF.	<ul style="list-style-type: none"> • No cassette has been inserted. • The tape is at its end. • No program is set for timer recording.
	The cassette is ejected when you press TIMER REC ON/OFF.	<ul style="list-style-type: none"> • The safety tab of the cassette has been removed.
	Timer recording was not made.	<ul style="list-style-type: none"> • There has been a power interruption of 3 hours or more. • TIMER REC ON/OFF was not pressed.
Data screen	The data screen disappears	<ul style="list-style-type: none"> • Press DATA SCREEN. • The TV or color monitor is connected via the LINE OUT jacks.
Others	Cassette cannot be inserted	<ul style="list-style-type: none"> • A cassette has already been inserted.
	The Commander cannot be operated.	<ul style="list-style-type: none"> • The COMMAND MODE switch has not been set correctly. • The batteries are exhausted.
	A short beep sounds repeatedly.	An illogical operation has been made.

Specifications

System

Video recording system	Rotary two-head helical scanning FM system
Video signal	EIA standard, NTSC color
Tape speed	SP: 33.35 mm/sec. (1 1/4 inches/second) EP: 11.11 mm/sec. (3/8 inches/second) LP: 22.22 mm/sec. (7/8 inches/second) Playback only
Maximum recording/ playback time	8 hours in EP mode (with T-160)
Fast-forward and rewind time	Approx. 4 min. (with T-120)
High speed rewind time	Approx. 2 min. 30 sec. (with T-120)

Tuner Section

Tuner system (audio)	Split inter-carrier system
Channel coverage	VHF channels 2 to 13 UHF channels 14 to 69 CATV channels A-8 to A-1, A to W, W+1 to W+84
Antenna	75 ohm antenna terminal for VHF/UHF

Inputs and Outputs

LINE IN 1 and 2	VIDEO IN (phono jack) (1 each) Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative AUDIO IN (phono jack) (1 each) Input level: -7.5 dBs (0 dBs = 0.775 Vrms) Input impedance: more than 47 kilohms
LINE OUT	VIDEO OUT (phono jack) (1) Output signal: 1 Vp-p, 75 ohms, unbalanced, sync negative AUDIO OUT (phono jack) (1) Standard output: -7.5 dBs at load impedance 47 kilohms Output impedance: less than 10 kilohms
MONITOR OUT	VIDEO OUT (phono jack) (1) Output signal: 1 Vp-p, 75 ohms, unbalanced, sync negative AUDIO OUT (phono jack) (1) Standard output: -7.5 dBs at load impedance 47 kilohms Output impedance: less than 10 kilohms
CONTROL S IN	Minijack (1)

Timer Section

Clock	Quartz locked
Time indication	12-hour cycle
Timer setting	Only for recording 8 programs in one month at max.
Power back up	Built-in self-charging battery Back-up duration: Up to 3 hours at one time

General

Power requirements	120 V AC, 60 Hz
Power consumption	29W
AC outlet	Max. 400W (unswitched)
Operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Dimensions	430 x 99 x 364 mm (w/h/d) (17 x 4 x 14 3/8 inches)
Weight	5.7 kg (12 lb 9 oz)

Wireless Commander RMT-V353

Remote control system	Infrared control
Command mode	VTR 1/2/3 switchable
Power requirements	3V DC, 2 size AA batteries (IEC designation R6)
Dimensions	62 x 20 x 175 mm (w/h/d) (2 1/2 x 7/8 x 7 inches)
Weight	95g (4.7 oz) (excluding batteries)

Accessories Supplied

Wireless Commander RMT-V353 with two size AA batteries (IEC designation R6)	(1)
75-ohm coaxial cable with F-type connectors	(1)
Antenna connector	(1)
AC power cord	(1)

Design and specifications are subject to change without notice.

BACK OF UNIT
LINE IN LINE MONITOR
OUT OUT
DEO(2) D1 D2

W10 D11 D12 D13

VHF CABLE
Cable

0

TV SET
A B C VIDEO

VIDEO IN

THR OUT

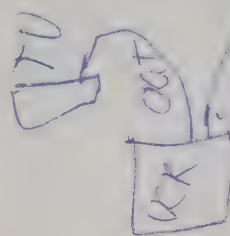
0 0

TVOLT

VHF CABLE
+VHF Cable

DATA CABLE
CABLE

14710 on ch 3 play



Record-VTR switch

and the
what is

Or use +V or -

to the end of 100.

For record with audio-tape JACKS see connection chart
or connect to 101 N I sh recorder and other com
to see other wiring.

SONY®

VIDEO CASSETTE RECORDER ^{Beta} **B**

SL-5000

SET-UP GUIDE

Before operating the unit, please read this guide thoroughly, and retain it for future reference.

The guide shows you how to set up your video cassette recorder. For operating procedures for everyday use of the recorder, refer to the "OPERATING GUIDE".

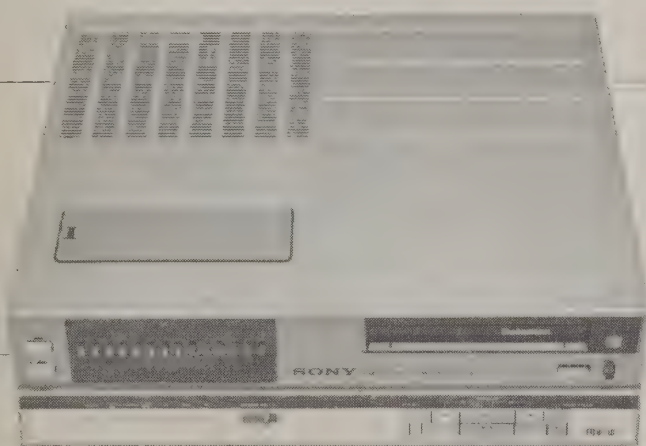


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Note on operating power voltage and frequency	2
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Adjusting the TV	6
To set the recorder channel select buttons to the TV stations in your area	7
Specifications	back cover

OWNER'S RECORD

The model and serial numbers are located at the rear. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. SL-5000

Serial No. 280387

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

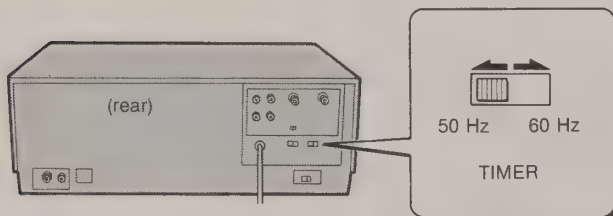
NOTE ON OPERATING POWER VOLTAGE AND FREQUENCY

The SL-5000 video cassette recorder comes in three models to suit the local operating power voltage and frequency.

Type 1: Model available in the U.S.A., Canada, Central and South America (except the Chile), etc.
This unit operates on 120 V ac, 60 Hz.

Type 2: PX model
This unit operates on 120 V ac, 50/60 Hz. Before connecting the unit to the power source, set the **TIMER** switch at the rear to the appropriate position, as indicated below.

Type 3: Model available in other countries.
This unit operates on 220 V ac, 50/60 Hz. Before connecting the unit to the power source, set the **TIMER** switch at the rear to the appropriate position.



CAUTION FOR THE CUSTOMER WHO HAS THE MODEL OF TYPE 1 OR TYPE 2:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THE POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

PRECAUTIONS

On safety

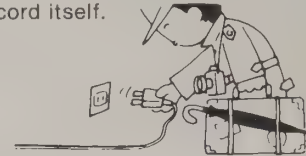
● Before operating, check that the operating power voltage and frequency of the unit are identical with those of your local power supply.

● Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.



● Type 1 and 2 models are equipped with a polarized AC power cord plug (one blade of the plug is wider than the other), which will fit into the power outlet only one way. Should you be unable to insert the plug fully into the outlet, try reversing the plug. Should the plug still fail to fit, contact your dealer for assistance. Do not defeat the safety purpose of the polarized plug.

● Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.



On installation

● Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.



● Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.



● The unit is designed for operation in a horizontal position. Do not install it in an inclined position.

● Keep the unit and cassette tapes away from equipment with strong magnets, as for example, a microwave oven or a large loudspeaker.



● Do not place any heavy object on the unit.

On operation

● When the unit is not in use, turn the power off to conserve energy and to extend its useful life.

● Remove and store video cassettes after recording or playback.

On cleaning

Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution.

Do not use any type of solvent, such as alcohol or benzene, which might damage the finish.

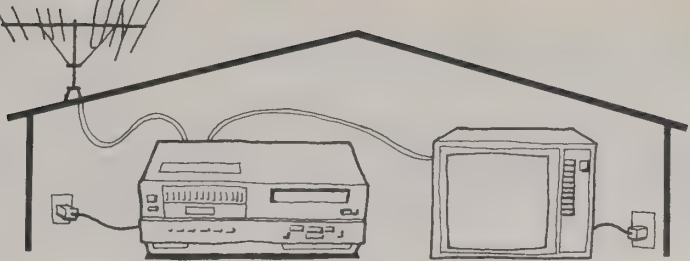
On repacking

Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

If you have any questions about this unit, contact your Sony dealer.

ANTENNA CONNECTIONS

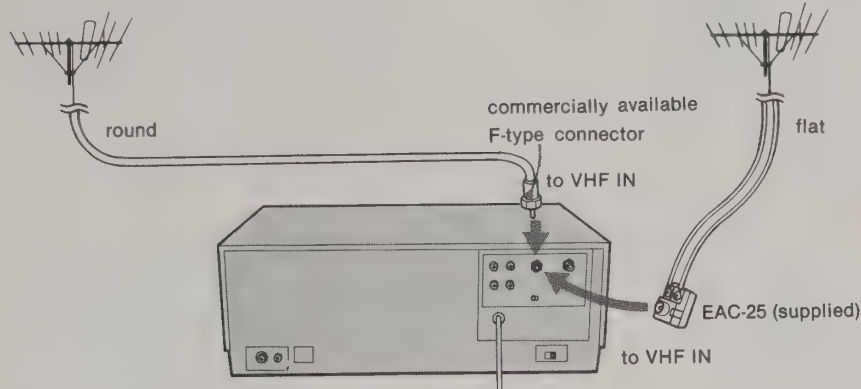
Disconnect the TV antenna cables from the TV receiver and connect them to the recorder.



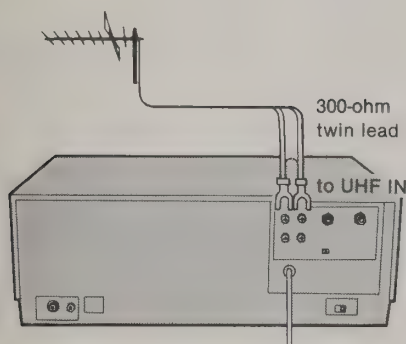
VHF antenna

If the cable is a round 75-ohm coaxial cable

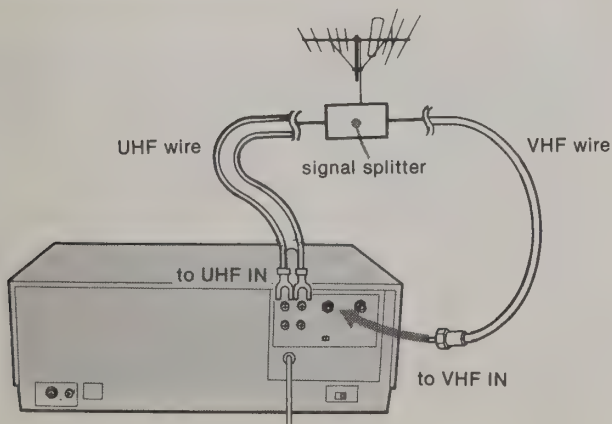
If the cable is a flat 300-ohm twin lead



UHF antenna

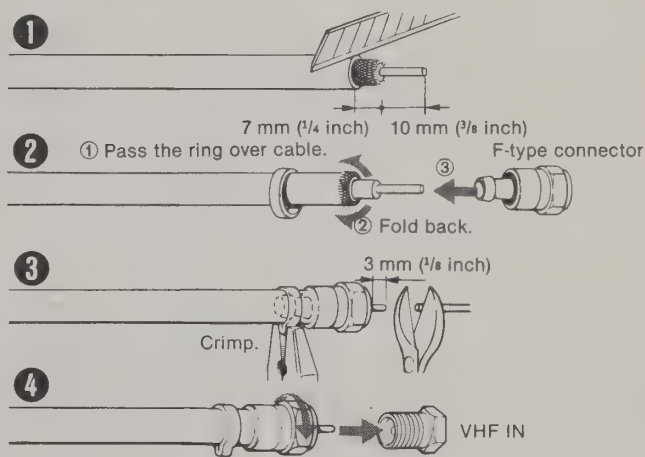


Combination VHF/UHF antenna

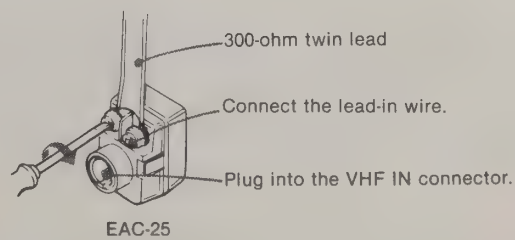


Most combination antennas are equipped with a signal splitter. If you need a splitter or a complete antenna system, see your Sony dealer or a qualified technician.

How to attach an F-type connector



How to attach an EAC-25 external antenna connector

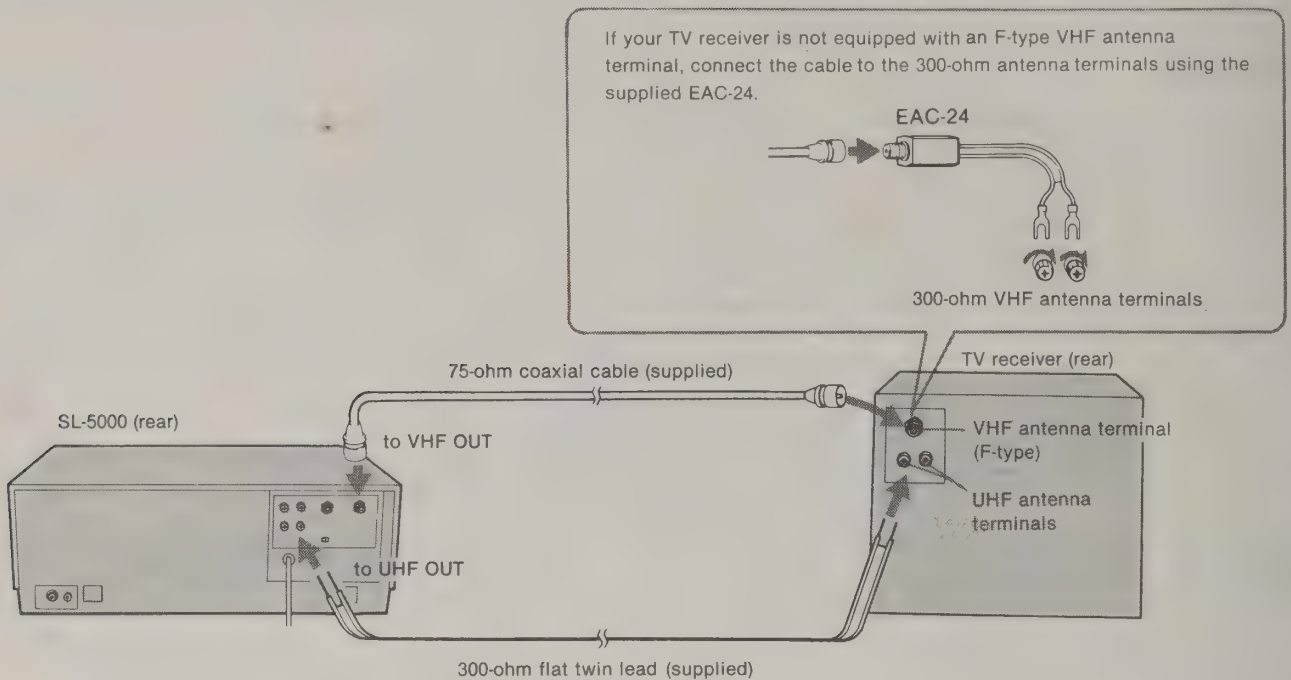


CONNECTING THE TV RECEIVER

Connecting a conventional TV receiver

Once the connections shown below have been made, the antenna TV signals, as well as the signal from the recorder, will be fed to the TV and you can view TV programs in the usual way.

- Use an optional RFC-8 extension cable (available in the U.S.A. and Canada), 8 m (25 ft) long, if the supplied 75-ohm coaxial cable is not long enough.



Caution

Connections between the recorder VHF OUT connector and the antenna terminals of a TV receiver should be made only as shown in these instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of rf devices.

Never connect the output of the recorder to an antenna or make simultaneous (parallel) antenna and recorder connections at the antenna terminals of your receiver.

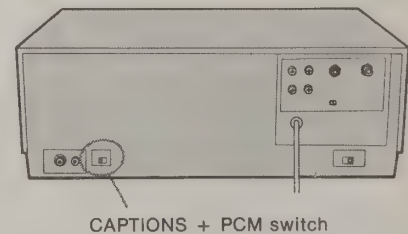
POWER CONNECTION

After the antenna and TV receiver have been connected, connect the ac power cord of the recorder to a wall outlet.

CAPTIONS + PCM switch

Captioned TV programs* can be recorded and played back with this recorder when a decoder unit or a TV designed to receive closed caption signals is connected. PCM recording and playback can also be made when a PCM digital audio processor, such as the Sony PCM-10, is connected. For captioned program or PCM playback, set the CAPTIONS + PCM switch under the cover to the left position.

For details, see the instruction manual of the decoder, the TV or the audio processor.



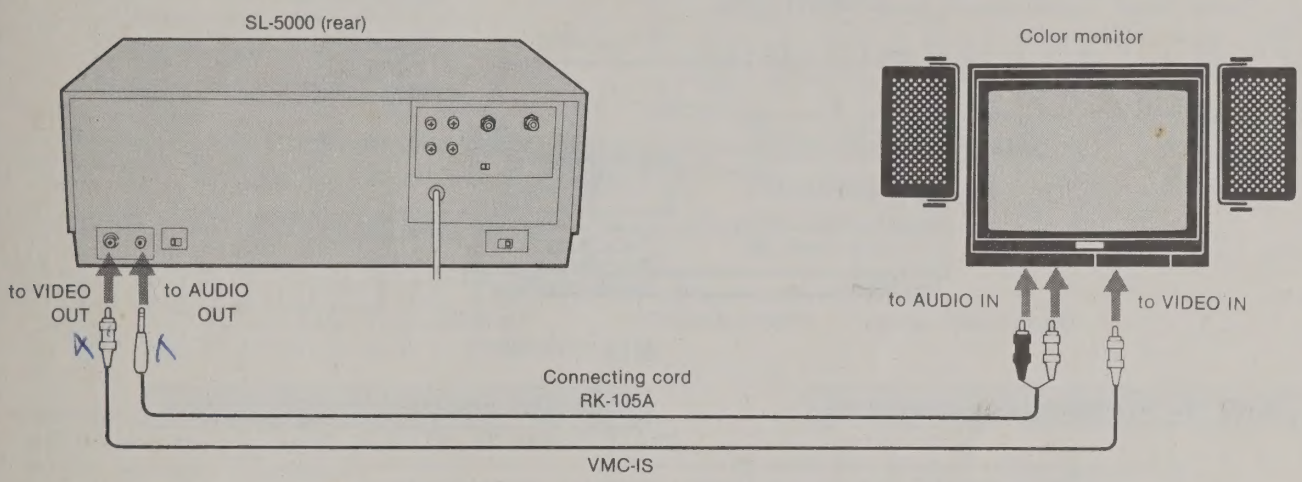
* TV programs for the hearing impaired broadcast in the U.S.A.

1800 624 5002 502 Page

Connecting a color monitor

To obtain a high-quality picture, connect a color monitor, such as the Sony Profeel Trinitron Component TV, instead of a conventional TV receiver.

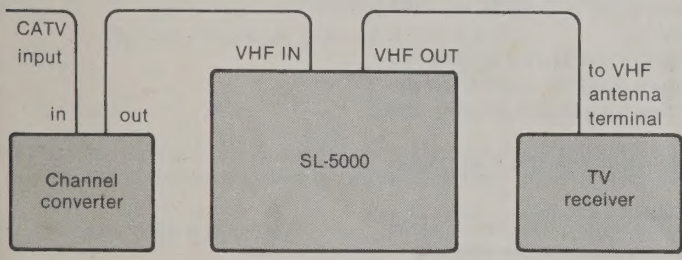
If you use a component TV tuner together with the monitor, connect the recorder and the TV tuner in the same way as in the case of the recorder and the conventional TV receiver described on the previous page. For details on the connection of the TV tuner and the monitor, refer to the instruction manual of the TV tuner.



CONNECTIONS TO A CABLE TV (CATV) SYSTEM

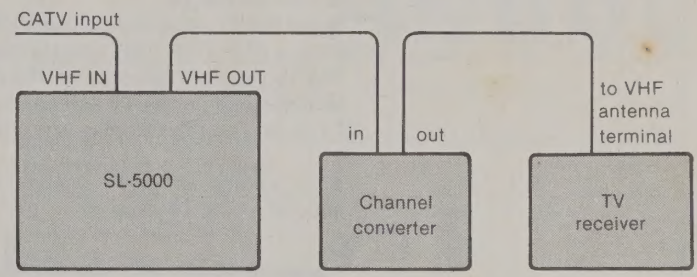
- We recommend that you consult with your cable television company for proper connection of your Betamax unit to your cable TV system.
 - Before operating the recorder with a cable TV system, set the RF UNIT channel selector on the recorder to channel 3 or 4, whichever is not active in your area.
- If both channels are viewable, check which gives better results by switching between channels 3 and 4.

System A



In the above configuration, you can record programs from all CATV channels as well as VHF channels 2 through 13. Set the TV channel selector to the same channel as the RF UNIT channel selector. Set the channel select button on the recorder to receive the output channel of the converter. Press the PROGRAM SELECT button on the recorder to turn the VTR lamp on. Now the channel to be viewed or to be recorded is selected on the converter.

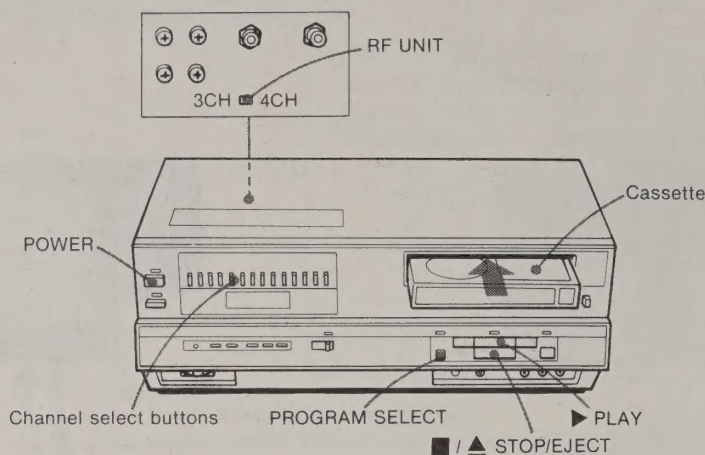
System B



In this configuration, you can view a program from the converter while recording a program from VHF channels 2 through 13 via the recorder. Set the TV channel selector to the output channel of the converter and press the PROGRAM SELECT button to turn the VTR lamp off. For playback, set the channel selector on the converter to the same channel as the RF UNIT channel selector. When a channel converter is not used, connect the CATV input to the recorder, then connect the recorder and the TV receiver as shown in the previous TV connection diagrams.

ADJUSTING THE TV

Adjust your TV receiver to receive the signal from your recorder.
When you have connected a color monitor, adjusting the TV is not necessary.



If you do not have a recorded video cassette tape

If you have a recorded video cassette tape

- ① Set the RF UNIT channel selector located at the rear of the recorder to 3CH or 4CH whichever channel is not active in your area.
- ② Push in the POWER button. The lamp lights.

- ③ Press the PROGRAM SELECT button to turn the VTR lamp on.
- ④ Select an active channel in your area with a channel select button on the recorder.

- ③ Insert the cassette with the round window to the left.
- ④ Press the ► button.

- ⑤ Turn on the TV.
 - ⑥ Set the TV receiver to either VHF channel 3 or 4 to agree with the setting of the RF UNIT channel selector.
- The TV program selected on the recorder or the tape program will be displayed on the TV screen. If a picture does not appear on the TV screen or if the display is not clear, fine tune the channel on the TV.
- For details about TV channel adjustment, see the instruction manual of the TV receiver.

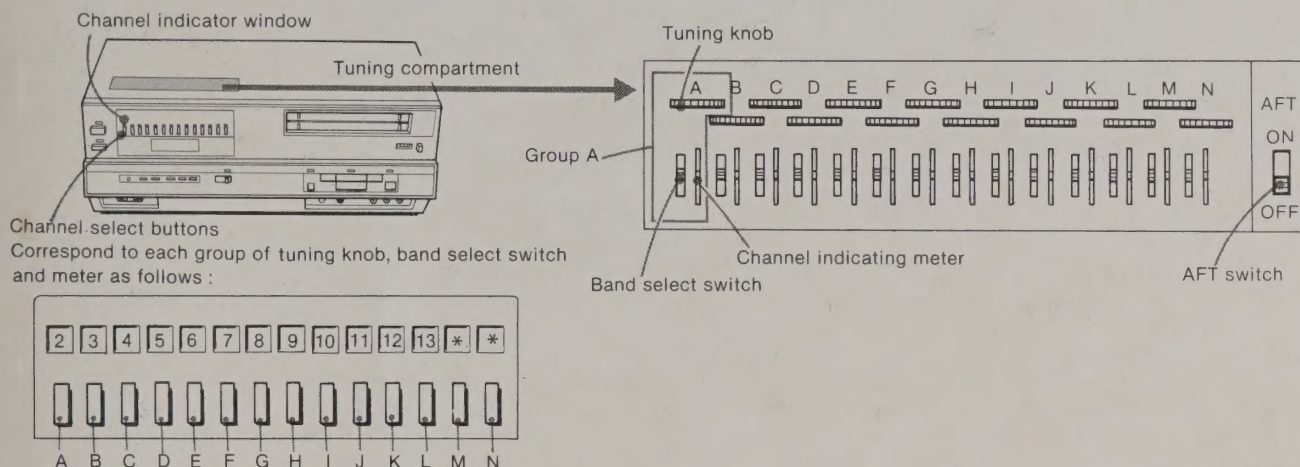
Check!
Check that the program displayed on the screen changes when a different channel select button on the recorder is selected.
If the program does not change, repeat the preceding steps.

Check!
Check that the display on the screen changes when you stop the tape by pressing the ■ / ▲ button on the recorder. (To eject the cassette, press the ■ / ▲ button again.)
If the program does not change, repeat the preceding steps.

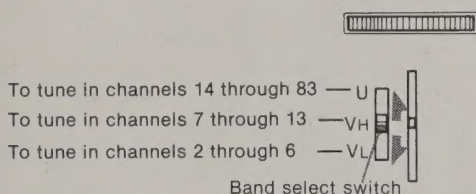
Now your TV receiver is tuned to the recorder. Whenever you use the video recorder, you should set the TV to the channel which you have chosen above.

TO SET THE RECORDER CHANNEL SELECT BUTTONS TO THE TV STATIONS IN YOUR AREA

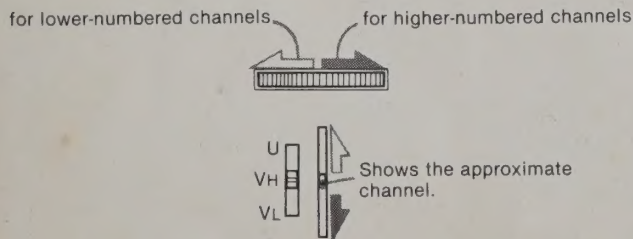
The channel select buttons are pre-adjusted at the factory to VHF channels 2 through 13 and to two UHF channels. These pre-adjusted channels may be set up to receive any local station, VHF or UHF.



- Make sure of the following:
 - that the VHF and UHF antennas and the TV receiver are connected. (See pages 3, 4 and 5.)
 - that your TV receiver and recorder are turned on.
 - that the PROGRAM SELECT button has been pressed (The VTR lamp should be lit).
 - that the TV receiver is set to the correct channel for the video recorder.
- Open the tuning compartment.
- Set the AFT switch to OFF.
- Push the recorder channel select button to be preset. The associated channel indicator will light.
- Set the band select switch associated with the pushed button to one of these positions: VL, VH or U.



- Turn the tuning knob, watching the TV screen until the picture of the desired channel is clearly displayed and the sound is clear.



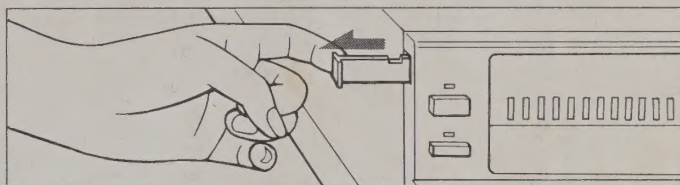
To identify the channels, consult a newspaper, TV program guide or another TV set.

- Repeat steps 4, 5 and 6 for the other channel select buttons.
- Set the AFT switch to ON when all stations have been set up as desired.

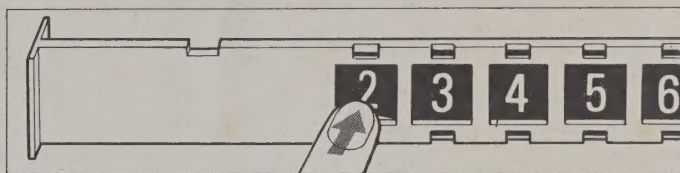
To replace the channel indicating segments

Channel indicating segments are supplied for identification of the preset channels. Affix the segments as follows :

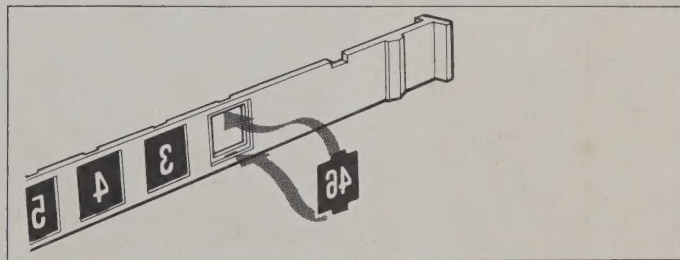
- Pull out the channel indication plate.



- Press the segment out from the front.



- Pick out the appropriate segments for the channels preset and insert them into the plate.



- Replace the plate.

SPECIFICATIONS

System

Video recording system Rotary two-head helical scanning
Video signal EIA standards, NTSC color
Channel coverage VHF channels 2 - 13
UHF channels 14 - 83
VHF output signal Channel 3 or 4 (selectable)
75 ohms, unbalanced
Antenna 75-ohm external antenna terminal for VHF
300-ohm external antenna terminals for UHF

Video

Input VIDEO IN : phono-type connector
1.0 V (p-p), 75 ohms, unbalanced,
sync negative
Output VIDEO OUT : phono-type connector
1.0 V (p-p), 75 ohms, unbalanced,
sync negative
Signal-to-noise ratio Better than 45 dB

Audio

Input AUDIO IN : mini jack
100 k ohms, -10 dBs (0 dBs = 0.775 V rms)
MIC : mini jack
-60 dBs, suitable for microphone with
600-ohm impedance
Output AUDIO OUT : mini jack
Less than 10 k ohms, -5 dBs (100 k ohms
load), unbalanced
Frequency response **BI** : 50 - 10,000 Hz
BII : 50 - 7,000 Hz
Signal-to-noise ratio Better than 40 dB

Tape transport

Tape speed **BI** : 4.0 cm/sec. (playback only)
BII : 2.0 cm/sec.
BIII : 1.33 cm/sec.
Maximum recording time **BI** : 3 hours 20 min.
BII : 5 hours
(with Sony L-830 cassette)
Fast forward time Under 4 min. (L-500)
Rewind time Under 4 min. (L-500)

General

Power requirements 120 V ac $\pm 10\%$, 60 Hz $\pm 0.5\%$
Power consumption 48 W
Timer Used only for recording
Electronic digital timer
24-hour cycle, synchronized with
the power line frequency
Operating temperature 5°C to 40°C (41°F to 104°F)
Storage temperature -20°C to +65°C (-4°F to +149°F)
Dimensions Approx. 460 x 168 x 380 mm (w/h/d)
(18 $\frac{1}{8}$ x 6 $\frac{5}{8}$ x 15 inches)
incl. projecting parts and controls
Weight Approx. 13.8 kg (30 lb 7 oz)

Accessories supplied

Betamax video cassette tape (1)
EAC-24 external antenna connector (75-ohm to 300-ohm matching
transformer) (1)
EAC-25 external antenna connector (300-ohm to 75-ohm matching
transformer) (1)
75-ohm coaxial cable with F-type connectors 2 m long (6 feet) (1)
300-ohm twin lead 2 m long (6 feet) (1)
Remote control unit (1)
Channel indicating segments (1 set)

Optional accessories

Betamax video cassette tape L-250, L-500, L-750, L-830, etc.
Video head cleaning cassette L-25CL
Color video camera HVC-2000, HVC-2200 (available in the U.S.A.
and Canada)
HVC-2000E (available in other countries)
AC adaptor for the camera HVA-200 (available in the U.S.A. and
Canada)
HVA-200E (available in other countries)

Design and specifications subject to change without notice.

mail order registration card Oct 7, '82
USA 2 SL-5000
No. 280387 120V